State of Iowa

1938

Rules and Regulations

OF THE

Iowa State Department of Health

RELATING TO

Communicable and Other Reportable Diseases

WITH SUGGESTIONS FOR THEIR PREVENTION OR CONTROL

Please Preserve: Edition Limited

REPEAL

All rules and regulations relating to communicable diseases adopted or approved by the State Department of Health prior to July 1, 1935, are hereby declared null and void.

Published by
THE STATE OF IOWA
Des Moines

OFFICIAL NOTICE

The Rules and Regulations relating to communicable and other reportable diseases, revised and adopted by the Iowa State Department of Health, have been prepared and promulgated in accordance with the provisions of Code of 1924, Section 2191, which statute gives to the State Department of Health supervision of the interests of the public health of the citizens of the state, and confers upon said Department authority to make such rules and regulations and sanitary investigations as may from time to time be necessary for the preservation and improvement of the public health. The statute provides also that the rules and regulations made by the Department shall be enforced by local Boards of Health and peace officers of the state.

It is expected that local Boards of Health will endeavor to give publicity to these Rules and Regulations in order that residents in each health district may become familiar with them.

CERTIFICATION

It is hereby certified to all County Auditors and local Boards of Health that the Rules and Regulations contained herein were adopted by the Iowa State Department of Health, July 1, 1938, and that the same will become effective July 15, 1938.

WALTER L. BIERRING,

(Seal) Commissioner of Health.

Dated at Des Moines this 1st day of July, 1938.

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This Issue Supersedes all Previous Issues

Destroy all Previous Issues

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Des Moines

IOWA STATE DEPARTMENT OF HEALTH

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M. E. Barnes, M.D., Director

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Medical Laboratories Bldg., State University of Iowa, Iowa City, Iowa

RULES AND REGULATIONS OF IOWA STATE DEPARTMENT OF HEALTH RELATING TO COMMUNICABLE AND OTHER REPORTABLE DISEASES

Revised and Adopted July 1, 1938

Effective July 1, 1938

SEC. I. STATE BOARD OF HEALTH DEFINED.

2218. Composition of Board of Health. The State Board of Health shall consist of:

1. The Commissioner of Public Health.
2. The Members of the Executive Council.
3. Five Health Officers to be appointed by the Governor.

2219. Appointment of Members. The Governor shall appoint, prior to the second Tuesday in January, 1925, and every two years thereafter, the five Health Officers provided for in the preceding section, who shall serve for a period of two years or until their successors are appointed and qualify. Not more than one of such Health Officers shall be appointed from any one congressional district.

2220. Duties of Board of Health. The State Board of Health shall be an advisory body to the State Department of Health . . . .

SEC. II. STATE DEPARTMENT OF HEALTH DEFINED.

CHAPTER 105.

THE STATE DEPARTMENT OF HEALTH

2191. Powers and Duties. The Commissioner of Public Health shall be the head of the "State Department of Health," which shall:

1. Exercise general supervision over the public health, promote public hygiene and sanitation, and, unless otherwise provided, enforce the laws relating to the same.
2. Conduct campaigns for the education of the people in hygiene and sanitation.
3. Issue monthly health bulletins containing fundamental health principles and other health data deemed of public interest.
4. Make investigations and surveys in respect to the causes of disease and epidemics, and the effect of locality, employment, and living conditions upon the public health. For this purpose the department may use the services of the experts connected with the bacteriological and epidemiological laboratory at the state university.
5. Make inspections of the sanitary conditions in the educational, charitable, correctional, and penal institutions in the state.
6. Make inspections of the sanitary conditions in any locality of the

state upon written petition of five or more citizens from said locality, and issue directions for the improvement of the same, which shall be executed by the local board.

7. Make inspections of the public water supplies, sewer systems, sewage treatment plants, and garbage and refuse disposal plants throughout the state, and direct the method of installation and operation of the same.

8. Establish, publish, and enforce a code of rules governing the installation of plumbing in cities and towns and amend the same when deemed necessary in the manner prescribed in the following section. Said rules and amendments shall be published in the same manner as other rules of the department.

9. Exercise general supervision over the administration of the housing law and give aid to the local authorities in the enforcement of the same, and it shall institute in the name of the state such legal proceedings as may be necessary in the enforcement of said law.

10. Hear and determine all appeals from the order of any local board made in connection with the enforcement of the housing law, and enforce its orders therein.

11. Establish stations throughout the state for the distribution of antitoxins and vaccines to physicians, druggists and other persons, at cost. All antitoxins and vaccine thus distributed shall be labeled "Iowa State Department of Health."

12. Exercise general supervision over the administration and enforcement of the venereal disease law, chapter 109.

13. Exercise sole jurisdiction over the disposal and transportation of the dead bodies of human beings and prescribe the methods to be used in preparing such bodies for disposal and transportation.

14. Exercise general supervision over the administration and enforcement of the vital statistics law, chapter 114.

15. Enforce the law relative to the "Practice of Certain Professions Affecting the Public Health," title 8.

16. Establish and maintain such divisions in the departments as are necessary for the proper enforcement of the laws administered by it, including a division of contagious and infectious diseases, a division of venereal diseases, a division of housing, a division of sanitary engineering, a division of vital statistics, and a division of examinations and licenses; but the various services of the department shall be so consolidated as to eliminate unnecessary personnel and make possible the carrying on of the functions of the department under the most economical methods.

17. Establish, punish, and enforce rules not inconsistent with law for the enforcement of the provisions of this title and for the enforcement of the various laws, the administration and supervision of which are imposed upon the department.

Practicing without a license—right to institute prosecution.

1. Prosecutions for the enforcement of the laws regulatory of the practice of medicine and surgery may be instituted without any authority from the State Department of Health.

State vs. Heuser, 205-132; 215 NW 643.

SEC. III. AUTHORITY, AS RELATED TO COMMUNICABLE DISEASE.

1. **Necessity and Requirements.** It is hereby declared by the State Department of Health to be necessary and proper for the preservation of the public health to make the following rules and regulations concerning relationship with places of infection and for the apprehension and treatment of persons who may be affected with or who shall have been exposed to any infectious, contagious or communicable disease.

2. **Minimum Requirements.** It is hereby declared by the Iowa State Department of Health that these rules and regulations are to be the MINIMUM REQUIREMENTS for the safeguarding of the public health within this state. Health Officers have no discretionary powers to lessen these requirements but may increase them to fit attendant circumstances.

3. **Power to Made Additional Rules.** Local Boards of Health are authorized and empowered by law to make such additional rules and regulations for the care and control of communicable diseases as may be necessary within their jurisdiction, provided they are not in conflict with these basic rules and regulations and are not contrary to the best public health practice.

4. **Reports Required. Every physician or professional attendant and, in the absence of such attendants, the parents, guardian, school teacher or householder where a case of communicable or reportable disease exists, must, on its discovery, immediately report the case to the Local Health Officer, or, in the absence of such officer, to the Local Board of Health. All reports must be forwarded to the State Department of Health.** (See Section VII.)

5. **Health Officer to Examine.** The Local Boards of Health upon receiving a report of a communicable disease from a person who is not a licensed physician must at once give an order to the Local Health Officer to visit and examine the case reported. The Health Officer or representative of the Local Board of Health after receiving the order must examine the person suspected of having the disease and make a report to the Local Board of Health with his recommendations.

6. **Investigation of Reports.** Whenever it is reported that a suspected case of reportable disease exists or that a person has reason to believe that a case exists, the Local Board of Health shall have the report investigated by its Health Officer and adequate means must be provided for the protection of the public.

7. **General Duties of Health Officer.** Section 2236, Code of 1931. The Health Officer shall be the executive officer of the Local Board in all matters pertaining to the public health, the control of communicable diseases, disposal of refuse and night soil, and the pollution of wells and other sources of water supply; and he shall recommend to the Local Board the proper measures to be taken for the abatement of unhealthful conditions and for the preservation of the public health. He shall receive reports

of cases of reportable diseases, impose and terminate quarantine. He shall keep a record of cases reported to him (name, age, sex, address, birthplace, occupation, school or place of employment of the person reported to be ill, the name of the person making the report, the date of receipt by him of the report, the date of transmission of the report to the State Department of Health, the date of quarantine, the date of release from quarantine, the termination of the case and source of infection if known) in a book kept for the purpose. He shall forward reports of cases to the State Department of Health in accordance with its rules and regulations.

8. **Health Officer.** The Local Health Officer or the Local Board of Health, must forward the reports of all reportable diseases to the State Department of Health within 24 hours after they are received.

9. **Removal of Infectious Case.** Removal of a case of communicable disease while in an infectious stage from the jurisdiction of one Local Board of Health to that of another shall not take place without the consent of both boards. Should such removal be allowed, this fact must be reported to the State Department of Health.

SEC. IV. WORDS AND TERMS DEFINED.

(a) **Commissioner of Health.** The term "state commissioner of health" means and includes the acting commissioner of health, the deputy state commissioner of health or any person legally authorized to act for the state commissioner of health.

(b) **District, County, City or Local Health Officer.** The term "health officer" shall mean the physician who is the health officer of a health district, county, city or local board of health.

(c) The "local or county board" shall mean the local or county board of health.

(d) **Communicable Disease.** A communicable disease is a disease which follows the entrance into the body and the multiplication therein of disease-producing organisms and which is capable of being transmitted, directly or indirectly, to other persons or animals. The term "communicable disease" includes those diseases commonly known as "contagious" and "infectious."

(e) **Infectious Agent.** An infectious agent is a living microorganism, capable, under favorable conditions, of causing disease. The words, "germ," "microorganism" and "infectious agent" are used interchangeably.

(f) **Incubation Period.** The term "incubation period" is applied to that interval of time which usually elapses between the entrance into the body of a disease-producing organism and the occurrence of the first symptoms of the disease.

(g) **Period of Communicability.** The period of communicability is the time during which a person affected with a communicable disease is capable of transmitting the infectious agent to others.

40. Tularemia
41. Typhoid Fever
46. Yellow Fever

In addition the following occupational or industrial diseases are declared to be reportable:

1. Silicosis
2. Silicatosis
3. Poisoning by phosphorus or its compounds
4. Poisoning by cyanide or any of its compounds
5. Carbon monoxide poisoning
6. Poisoning by chlorine, ammonia, sulphur dioxide or any irritating gas
7. Poisoning by hydrogen sulphide or any other sulphide
8. Poisoning by benzol or nitro-, hydro-, hydroxy- and amido- deriva-

contamination of food.

(l) **Cultures.** "Cultures" are growths of microorganisms propagated in or upon artificial media. The material for cultures is obtained from body fluids, secretions and excretions, for the purpose of determining the presence of disease-producing germs.

(m) **Quarantine.** "Quarantine" means the complete detention of a person within his own residence or temporary place of abode and the exclusion of the public from said place for the purpose of safeguarding the public from a communicable disease.

(n) **Isolation.** "Isolation" means the separation of persons presumably or actually affected with disease, or who are disease carriers, or who have been exposed to communicable disease, in such places and under such conditions as will prevent the direct conveyance of the infectious agent to susceptible persons.

(o) **Restriction of Movement.** "Restriction of movement" signifies the exclusion of an individual from school and places of public assembly, and the restriction, so far as possible, of his or her association with persons not known to be immune.

(p) **Isolation or Quarantine Notice.** A quarantine notice or isolation card consists of a written or printed order of the health officer posted at one or more entrances, forbidding unauthorized persons to enter or leave the isolated or quarantined area.

(q) **Placard.** A "placard" is an official notice, written or printed, posted as a warning of the presence of a communicable disease on the premises or in the apartment or room which is placarded.

(r) **Disinfection.** "Disinfection" is the process of destroying the vitality of disease-producing microorganisms by physical or chemical means.

(s) **Concurrent Disinfection.** "Concurrent disinfection" signifies the daily disinfection and disposal of body discharges, and the daily disinfection or destruction of all contaminated articles during the course of illness.

(t) **Terminal Disinfection.** "Terminal disinfection" signifies the precautions taken to destroy or remove infectious material after the removal of the patient or the termination of isolation or quarantine.

the name of the person making the report, the date of receipt by him of the report, the date of transmission of the report to the State Department of Health, the date of quarantine, the date of release from quarantine, the termination of the case and source of infection if known) in a book kept for the purpose. He shall forward reports of cases to the State Department of Health in accordance with its rules and regulations.

8. **Health Officer.** The Local Health Officer or the Local Board of Health, must forward the reports of all reportable diseases to the State Department of Health within 24 hours after they are received.

9. **Removal of Infectious Case.** Removal of a case of communicable disease while in an infectious stage from the jurisdiction of one Local Board of Health to that of another shall not take place without the con-

SEC. V. PENALTY AND ENFORCEMENT.

1. **Penalty for Violation.** Sections 2246 and 2279 of the State Code of 1924 provide that anyone who neglects or refuses to comply with and obey any order, rule and regulation of the Local or State Department of Health shall be guilty of a misdemeanor.

2. **Rules Enforced.** Sections 2234 and 2244 of the State Code of 1924 provide that Local Boards of Health shall OBEY and ENFORCE the rules and regulations of the State Department of Health, and peace officers and police officers within their respective jurisdiction when called upon to do so by local boards shall execute the orders of such board.

SEC. VI. SCOPE OF RULES AND REGULATIONS.

For the purpose of these rules and regulations the following diseases are declared to be reportable:

1. Actinomycosis
2. Ankylostomiasis (Hookworm)
3. Anthrax
4. Chickenpox
5. Cholera
6. Dengue
7. Diphtheria
8. Dysentery (Amebic and Bacillary)
9. Epidemic Encephalitis (Sleeping Sickness)
10. Erysipelas
11. German Measles
12. Glanders
13. Gonorrhea
14. Impetigo
15. Influenza (Epidemic)
16. Leprosy
17. Malaria
18. Measles
19. Meningococcus Meningitis
20. Mumps
21. Ophthalmia Neonatorum (Acute Infectious Conjunctivitis)
22. Para-typhoid (Food Infection)
23. Pellagra
24. Plague
25. Pneumonia (Lobar or Broncho)
26. Poliomyelitis (Infantile Paralysis)
27. Psittacosis (Parrot Fever)
28. Rabies
29. Rheumatic Fever (Acute)
30. Ringworm
31. Rocky Mountain Spotted Fever
32. Scarlet Fever
33. Septic Sore Throat (Streptococcus)
34. Smallpox
35. Syphilis

Diarrhea & Enteritis, under 2 yrs. Bac. Dysentery

36. Tetanus
37. Trachoma
38. Trichiniasis
39. Tuberculosis
40. Tularemia
41. Typhoid Fever
42. Typhus Fever
43. Undulant Fever (Brucellosis)
44. Vincent's Angina
45. Whooping Cough
46. Yellow Fever

In addition the following occupational or industrial diseases are declared to be reportable:

1. Silicosis
2. Silicatosis
3. Poisoning by phosphorus or its compounds
4. Poisoning by cyanide or any of its compounds
5. Carbon monoxide poisoning
6. Poisoning by chlorine, ammonia, sulphur dioxide or any irritating gas
7. Poisoning by hydrogen sulphide or any other sulphide
8. Poisoning by benzol or nitro-, hydro-, hydroxy-, and amido- derivatives of benzene (dinitro-benzol, anilin, and others)
9. Poisoning by formaldehyde or its preparations
10. Poisoning from methyl chloride, carbon tetrachloride or any organic halide or solvent
11. Poisoning from volatile petroleum products (gasoline, benzine, naphtha, etc.)
12. Poisoning by wood alcohol
13. Chrome ulceration (nasal and skin)
14. Poisoning by sulphuric, hydrochloric or any other acid
15. Poisoning by nitrous fumes
16. Epithelioma (skin or eye) due to pitch, tar, bitumen, mineral oil, or paraffin, or any compound, product, or residue of any of these substances
17. Poisoning from lead, zinc or brass, cadmium, mercury, arsenic, manganese or any of their compounds
18. Radium poisoning or disability due to radioactive properties of substances or Roentgen rays (X-rays)
19. Metal fume fever (zinc fume fever, brass founder's ague, brass chills)
20. Conjunctivitis and retinitis due to electro- and oxy-acetylene welding or other radiant energy
21. Tenosynovitis or bursitis
22. Dermatitis (infection or inflammation of the skin on contact surfaces due to oils, cutting compounds or lubricants, dusts, liquids, solids, gases, vapors, or fumes)

SEC. VII. REPORTING.

A. REPORT OF CASES.

1. By the attending physician.
   a. Physician shall be provided with report cards for the reporting of cases of communicable or occupational disease. Report cards

METHOD OF REPORTING NOTIFIABLE DISEASES

Legend: _____ County organized on district or countywide basis;
_ . _ . _ . _ Unorganized county.

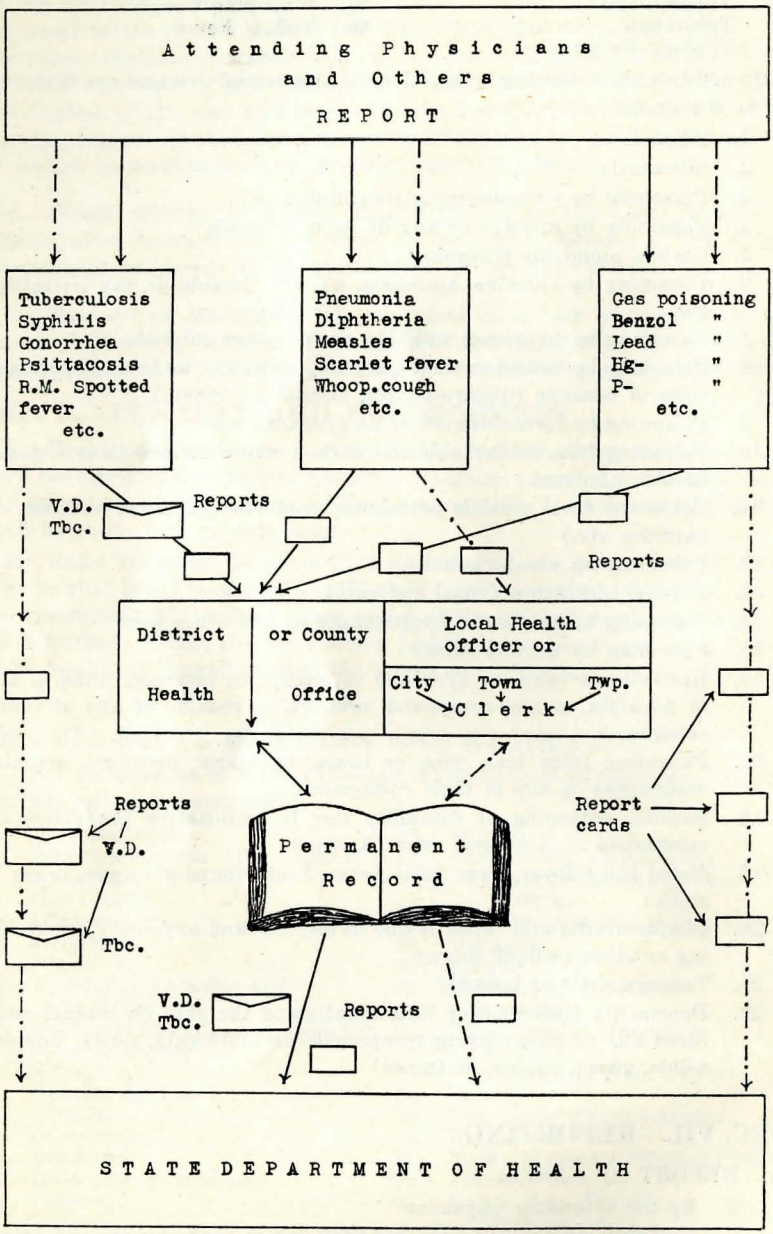

Fig. 1.

are forwarded from the State Department of Health on request of physicians, health officers or clerks.

b. The attending physician shall, on diagnosing a case, report the same by card, by telephone or by personal communication, to the district health office (in counties organized as a health district), to the county health office (in counties organized on a countywide basis), and to the local health officer or local board of health (city, town or township clerk) in counties organized on a city, town and township basis. See diagram (Fig. 1.) which outlines the method of reporting.

c. The attending physician shall report cases of tuberculosis, syphilis, etc., and conditions such as gas poisoning, benzol poisoning, etc. (See Fig. 1), directly to the State Department of Health, except in counties organized on a district or countywide basis, in which counties all reports should be mailed or otherwise forwarded to the district or county health officer.

2. By the local health officer or clerk of the local board of health.

a. Information regarding cases reported by attending physician and local health officers shall be recorded in a record book kept for this purpose, as outlined in Section 2236, Code of 1931.

b. Individual report cards, stating the name of the disease, date of onset, patient's name, age, sex, color and other items, shall be forwarded to the office of the Collaborating Epidemiologist, except in counties organized on a district or countywide basis, in which counties all reports should be mailed or otherwise forwarded to the district or county health officer.

c. In counties organized on a town and township basis, weekly report cards, listing the number of cases of communicable diseases reported for each week ending Saturday, shall be forwarded each week to the State Department of Health. (See diagram—Fig. 1.)

3. By the district and county health officer.

All reports of communicable and other reportable diseases, which have reached the health office from the various counties, townships or towns and comprising a health district or county health unit, shall be forwarded promptly, and at least once a week (preferably on Saturday), to the Iowa State Department of Health.

B. SPECIAL REPORTS.

For reporting syphilis or gonorrhea, special blanks are obtainable from the State Department of Health, district and county health offices, or at the office of each city clerk or health officer, which must be filled out and submitted directly to the State Department of Health, except when the case occurs in the jurisdiction of a full-time district, or county health officer, in which instance such report shall be sent to such officer, who shall promptly forward same to the State Department of Health as the official report of the case.

C. WHO MUST REPORT.

(a) The chief responsibility for reporting rests upon physicians, health officers and local boards of health, all reports to be forwarded to the State Department of Health.

(b) In the absence of an attending physician, NURSES shall report to the health officer or local board of health such case or cases as come under their observation.

(c) In the absence of an attending physician, any superintendent, teacher, parent or other person, shall report to the health officer such case or suspected case of which he has knowledge.

(d) All licensed embalmers must report to the Local Health Officer, when they are called to embalm the body of a person, whose death certificate certifies that the primary or secondary cause of death was one of the diseases mentioned in Section VI of these Rules and Regulations.

D. NEW CASES IN SAME HOME.

Every new case of a reportable disease developing in a family where one case already exists, shall be reported to the attending physician, health officer or local board of health.

E. SPECIAL METHOD OF REPORTING VENEREAL DISEASES.

Immediately after the first examination or treatment of any person with syphilis, gonorrhea or other venereal disease, the attending physician shall mail to the State Department of Health a report giving initials and date of birth of the patient, age, sex, color, marital condition, occupation, name of the disease, probable source of infection and duration of the disease, except when the case occurs in the jurisdiction of a full-time district or county health officer, in which instance such report shall be sent direct to such officer, who shall promptly forward same to the State Department of Health.

F. PRINTED CARDS OR FORMS.

Printed cards or forms on which attending physicians may report cases of any of the diseases mentioned in Section VI may be obtained from Health Officers or from the State Department of Health upon application.

SEC. VIII. PLACARDING OF CASES.

Samples of PLACARDS. For the purpose of these rules and regulations there shall be five placards, as follows:

(a) QUARANTINE PLACARD

A QUARANTINE placard shall be a card about 11x8½ inches having printed thereon in large letters the following:

QUARANTINE

(Name of the Disease printed or written in)

No one shall enter or leave these premises except as provided in the Rules and Regulations of the State Department of Health or Local Board of Health.

This card constitutes official notice of the establishment of this quarantine.

.....

Health Officer

The above placard, with the name of the disease inserted, MUST be used in quarantine of diphtheria, infantile paralysis, meningococcic meningitis and epidemic encephalitis.

(b) TEMPORARY QUARANTINE

TEMPORARY QUARANTINE

This card establishes a quarantine for 24 hours only. This Temporary Quarantine may be extended for a second 24 hours by the Local Board of Health.

During this Temporary Quarantine all Quarantine Rules and Regulations shall apply to these premises.

This card constitutes official notice of the establishment of temporary quarantine.

.....

Health Officer

A Temporary Quarantine placard will be used in the event that the type of the disease is not immediately determined or diagnosed. All persons in a household under "Temporary Quarantine" shall observe all the requirements of quarantine until a definite diagnosis is made. When a definite diagnosis is established, the report of such diagnosis must be made to the health officer or Local Board of Health, and the placard changed, in accordance with the findings and as required by these rules and regulations.

(c) ISOLATION
(Quarantine)

ISOLATION
(Quarantine)
SCARLET FEVER

(Note: By substituting the word SMALLPOX this type of placard will be satisfactory for isolation of cases of that disease.)

No one shall enter or leave these premises except as provided in the Rules and Regulations of the State Department of Health or Local Board of Health.

IT IS A MISDEMEANOR PUNISHABLE BY LAW:

(1) To expose minor children to this Disease. (2) For any susceptible child to return to school from these premises while this card is posted. (3) To remove this placard without authority of the Local Board of Health.

This card constitutes the official notice of the establishment of Isolation.

.....

Health Officer

The above placard is used for isolation of scarlet fever and smallpox.

(d) ISOLATION

ISOLATION
(Name of the Disease printed or written in)
exists on these premises.

It is a misdemeanor: (1) To expose minor children to this disease. (2) To remove this placard without authority.

Posted by order of

.....

Health Officer

The above card is used for cases of measles, whooping cough, and other diseases designated as placardable.

(e) DIPHTHERIA CARRIER

DIPHTHERIA CARRIER
Keep Out

This card restricts the movements of the Diphtheria Carrier. (1) Adults, not carriers, may go and come as usual. (2) Children living in this home in contact with the carrier must not attend school or public gatherings.

NOTICE: No one shall enter or leave these premises except such persons as are authorized by the Rules and Regulations of the State Department of Health or of the Local Board of Health.

.....

Health Officer

SEC. IX. QUARANTINE OR ISOLATION.

Quarantine or Isolation defined. For the purpose of these Rules and Regulations "quarantine" or "isolation" shall mean the segregation of persons having or suspected of having any communicable disease in such a place and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to the public.

Control of Communicable Diseases a Cooperative Matter. The control of communicable disease can be accomplished only in so far as people generally cooperate whole-heartedly in abiding by the restrictive rules. These latter should not be regarded so much as LAWS, but as detailed instructions whereby one can practice the Golden Rule in matters of this kind. Physicians should cooperate in educating their families so to regard them. People should be taught to consider a quarantine sign or placard on the house as an emblem of honor. It gives notice to the world that this family is practicing the Golden Rule. The absence of such signs when they should be posted warrants severe public criticism of both the family and the physician in charge of the case. Such signs should indicate further, that in the houses thus designated, all necessary restrictions are in force.

A. Quarantine or Isolation can be established only for an area or dwelling or such parts of a dwelling as have facilities for OBTAINING FOOD, WASHING CLOTHES, and means of PERSONAL TOILET.

Under such circumstances as approved by the Local Board of Health any other rooms under the same roof not needed by the persons within the isolated area may be sealed off by a representative of the Local Board of Health and used for other purposes, provided that entrance and exit can be had without entering the area that is under isolation.

B. Isolation can only be established in quarters that have facilities to provide for the ordinary necessities of life and any additional requirements of the sick person. Where such facilities do not exist, the health officer may remove the case to a proper place as authorized by law.

C. APPROPRIATE NOTICE of all isolation or quarantine areas shall be given the public, by means of placards and when deemed necessary, in other ways.

D. NO PERSON OR THING SHALL ENTER OR LEAVE an isolation area without specific permission of the health officer. Physicians and nurses in attendance upon the case are hereby granted this permission while carrying out their professional duties. Ministers of the gospel may be granted this permission by the health officer.

The breadwinner may be allowed to live in the house and attend to his work when the Health Officer is satisfied of the following conditions:

1. That the patient can be isolated so that the breadwinner need not and does not come in contact with him.
2. That the breadwinner in the course of his occupation does not handle food, including milk, designed for public consumption.
3. That the breadwinner does not come in contact with groups of children.
4. That the breadwinner, if the disease be smallpox, give assurance of existing immunity by evidence of successful vaccination or revac-

cination within seven years, or as the result of a known, previous attack of the disease.

5. That the breadwinner, if the disease be diphtheria or scarlet fever, give evidence of immunity to the Schick or Dick test and of freedom from being a carrier of the germs of these diseases.

E. ADULTS IN ISOLATION OR QUARANTINE AND NOT ILL WITH THE DISEASE, may have the use of their own yard and perform necessary duties on their farm, provided that they avoid direct contact with children and observe the regulations which apply to dairy farms (Section L).

F. Members of the family and persons intimately EXPOSED before the establishment of isolation, may be immunized, disinfected and released to live elsewhere only when so provided in these Rules and Regulations for the particular disease.

G. CATS, DOGS or any other domestic animals should not be allowed in rooms that are under isolation.

H. Adults, not ill with the disease, may be RELEASED BEFORE EXPIRATION of the isolation period only when such release is approved by the Health Officer, or in the absence of such officer by the Local Board of Health and allowed by these rules and regulations for the particular disease.

I. Isolation or quarantine shall not be terminated until all concurrent and terminal disinfection provided for in these Rules and Regulations shall have been carried out to the satisfaction of the Health Officer, and in full compliance with these Rules and Regulations.

J. MOVING A PERSON IN QUARANTINE OR ISOLATION. This is forbidden except as defined and described in these rules and regulations. See Section IXB.

Inasmuch as the restrictions placed about communicable disease, are imposed by authority of the State and Local Boards of Health, the removal of a patient from one place to another requires the prior approval of these bodies.

1. If such removals are within a single health jurisdiction, only the permit of the local health officer is required.
2. If transfer to another health jurisdiction within the state is desired, there must be secured:
   (a) The permit of the local health officer where the case now is.
   (b) The permit of the local health officer to whose jurisdiction the transfer is proposed.
   (c) The permit of the State Commissioner of Health to effect the transfer.
3. If the transfer is to another state, the three permits mentioned are required for Iowa, and the latter two from the state concerned.

K INSTRUCTIONS REGARDING DELIVERY OF MILK, GROCERIES, LAUNDRY, ETC.

1. To prevent the possibility of spread of infection through contamination of milk bottles, and to obviate the accumulation of such bottles in

isolation areas, milk shall be delivered in special containers which can be burned, or a pitcher or other suitable container placed outside the door of quarantined premises. Milkmen shall exercise care in the transfer of such milk from bottle to container and carry the bottle(s) away immediately. They shall also notify the housewife or attendant of the arrival of the milk so as to eliminate the possibility of contamination by domestic animals or through undue exposure in warm weather.

2. Grocerymen and other persons who deliver merchandise are forbidden to enter such premises or remove articles therefrom. Laundrymen shall not enter premises or remove articles of clothing unless these have been boiled or otherwise sterilized as instructed by the health officer.

L. QUARANTINE OR ISOLATION ON A DAIRY FARM. As long as there is a case of TYPHOID FEVER, DYSENTERY (amebic or bacillary), SCARLET FEVER, SEPTIC SORE THROAT or similar disease on a dairy farm, no dairy products of any kind may be sold EXCEPT with the written approval of the State Department of Health. The approval of the State Department of Health for the sale of dairy products of any kind will not be granted except under the following conditions:

1. That the person handling the dairy products has not been in contact with the case within a period of seven days.
2. That the milk utensils do not go into the house under isolation, nor into any shed, kitchen or other similar structure attached to such house.
3. That the milk utensils can be sterilized in a building separate from the house that is under isolation.

When the sale of dairy products from premises under isolation or quarantine is desired and some member of the family wishes to care for such dairy products, he must leave the isolated premises and live elsewhere for a period of seven (7) days during which time he must not handle the dairy products. Thereafter he must live outside the isolated area throughout the isolation period. At the end of the seven-day period, if he shows no symptoms of disease, he may handle dairy products. In case of isolation for smallpox, only those persons known to be immune by reason of previous successful vaccination within seven years or by having had smallpox, may be accorded this privilege. During the seven-day period, the dairy products may be handled by some person known not to have been exposed to the disease for which the premises are under isolation. When the Health Officer is satisfied that the conditions will be as stated above, he should report the fact to the State Department of Health with a request for approval for the sale of dairy products from the isolated area. The name of the owner and location of the dairy should be given in the Health Officer's letter. Upon receipt of the approval of the State Department, the Health Officer should give permission in writing for the sale of dairy products from the area under isolation.

M. TERMINATION OF QUARANTINE OR ISOLATION. When a person with any communicable disease reaches that stage where he is no longer giving off infectious material, and AS SOON THEREAFTER AS THE MINIMUM NUMBER OF DAYS SPECIFIED FOR THE PARTICULAR DISEASE HAVE ELAPSED, and all other Rules and Regulations of the State Department of Health and of the Local Board of

Health have been complied with, the Health Officer shall direct that TERMINAL DISINFECTION be performed. In counties organized on a district or countywide basis, release of premises from isolation is carried out in accordance with office records and after conferring with the attending physician relative to the patient's condition and the status of other members of the household.

N. When terminal disinfection of isolated premises has been completed to the satisfaction of the Health Officer, he shall release such premises from isolation, in accordance with the provisions of paragraph M, above.

SEC. X. EXCLUSION FROM SCHOOL AND OTHER GROUPS OF PEOPLE.

A. EXCLUSION FROM SCHOOL FOR PERIOD DESIGNATED.

Persons designated TO BE EXCLUDED FROM SCHOOL by these Rules and Regulations shall not enter any street car, railway train, automobile or public conveyance of any kind, attend any public or private school, any theatre, church, picnic or public gathering of any kind or description for the period specifically designated for each disease.

B. CLOSING OF THE SCHOOLS.

On the outbreak of an epidemic, there is often a popular demand that the schools be closed. This is based upon the belief that infection may spread among the children in attendance. It is noteworthy, however, that health authorities and the Rules and Regulations of state departments of health in general omit any recommendations that schools be closed. The reasons for this are:

(1) Children in schools are under much more careful disciplinary control than they are in their homes. With effective supervision by the health officer and with the aid of a trained and experienced community nurse, in cooperation with school officials and the pupils themselves, the children are safer at school than outside.

(2) Closure of schools is futile, unless all susceptible children are forbidden to leave their own yards. Permitting them to roam the streets, to attend the moving picture theatres, churches, social gatherings, or to indulge in unsupervised group play, may be much more dangerous from the standpoint of interchanging infection, than if they were under the discipline of the school room.

(3) Past experience has shown that the mere closing of the schools has had little or no effect upon the progress of epidemic diseases. Unless, therefore, a community is prepared to declare a complete and rigid embargo upon all susceptible children of school age, isolating them universally to the limits of their own yards and absolutely forbidding them to play with children of other families, the SCHOOLS, ordinarily, SHOULD NOT BE CLOSED.

(4) School boards, parent-teacher groups and other sponsoring agencies should concentrate on such efforts, year by year, as will assure immunity of children against diphtheria, smallpox and other infectious diseases for which specific preventive measures are available.

Parents are urged to confer with the attending physician and to have children immunized against preventable diseases, early in life.

SEC. XI. DISINFECTION.

A. DEFINITIONS AND EXPLANATIONS.

Disinfection Defined. By disinfection is meant "the destroying of the vitality of pathogenic microorganisms by chemical or physical means," and for the purpose of these Rules and Regulations the term shall mean the exercise of such specific measures for each disease, infectious discharge and soiled article as will render them innocuous and harmless.

(1) Isolation shall not be terminated until all the directions for CONCURRENT and TERMINAL DISINFECTION shall have been carried out in compliance with these Rules and Regulations and to the satisfaction of the Health Officer, or, in the absence of such officer, of the Local Board of Health.

(2) CONCURRENT DISINFECTION shall mean the immediate disinfection of the infectious discharges from the body of an infected person or after the soiling of articles with such infectious discharges, all personal contacts with such discharges or articles being prevented prior to their disinfection.

Concurrent disinfection shall be carried on daily during the isolation period and as long thereafter as required by the Health Officer.

B. METHODS OF DISINFECTION.

(1) How to Disinfect During Isolation—Concurrent Disinfection.

Discharges from infected EYES, EARS, NOSE, THROAT, SKIN LESIONS and GLANDS may be disinfected by being collected on bits of cotton, paper or cloth and BURNED AT ONCE.

(a) THE HAIR and SKIN of the patient or attendants may be disinfected by WASHING with soap and warm water.

(b) Bed clothes, pillow slips, sheets, nightgowns, towels, washcloths or any other cloth or clothing of any kind may be disinfected by soaking in a liquid disinfectant (see table on page 78) and then by being BOILED with soap and water, for ten minutes before leaving the premises or the quarantined area, if the case is quarantinable.

A bucket or tub with disinfectant, may be kept in the sick room. All bed and body linen used by the patient should immediately be placed in the disinfecting solution.

Once a day such bed and body linen should be taken to the stove and allowed to BOIL for ten minutes. Clothes so treated may be hung out to dry.

(c) Dishes, glassware, knives, forks, spoons or any utensils used in feeding the patient should be promptly disinfected by being WASHED and BOILED.

(d) Food from the sick room should not be eaten by others but should be collected and boiled or burned at once.

(e) Thermometers, rectal tubes, douche nozzles, etc., should not be removed from the sick room until the termination of the case. These articles should be WASHED clean with soap and water after each use; thermometers should be kept immersed in alcohol when not in use.

(f) Water that has been used to bathe the patient may be treated with a liquid disinfectant or immediately drained into a sewer system.

(g) Bowel discharges. Disinfection of the BOWEL DISCHARGES may be carried out by adding 3 tablespoonfuls of freshly opened chloride of lime to a liquid stool, and stirring the mixture until all parts of the stool have been thoroughly mixed with the chlorine. Carbolic acid (8 ounces to one gallon of water) is also effective, if exposed for at least one-half hour. This mixture should be allowed to stand, protected from flies, for one hour before being discharged into sewer or privy vault. The supply of chloride of lime should be kept in an air-tight container in a dry place.

Solid stool should have one pint of water added and be thoroughly stirred until the stool assumes a liquid character with all lumps broken and then treated as described above.

(h) Bladder discharges. Disinfection of bladder discharges may be carried out by stirring 3 tablespoonfuls of freshly opened chloride of lime into each passage and allowing this mixture to stand one hour before being discharged into a sewer or privy vault.

See Chapter III, page 68, for further information concerning "DISINFECTION and DISINFECTANTS."

(i) Bedpans and urinals should be thoroughly cleansed after each use, rinsed out and left containing a small amount of dry chloride of lime. Sufficient chloride of lime should be left in the receptacles so that the chlorine will be repugnant to flies. These receptacles should also be kept away from flies.

(2) **How to Disinfect After Isolation—Terminal Disinfection.**

TERMINAL DISINFECTION shall mean the exercise of those processes which will render the person, the personal clothing and the immediate physical environment of the patient free from possibility of conveying infectious agents, at a time when the patient is no longer giving off infectious material.

(a) Terminal disinfection of all clothes, bed clothes, thermometers, rectal tubes, dishes, glassware, etc., which have been exposed to the patient while he is giving off infectious material shall be carried out as described for CONCURRENT DISINFECTION.

(b) TERMINAL DISINFECTION of the person, rooms or dwelling shall be carried out by the use of chemicals, soap and water, fresh air and sunlight as found necessary for the individual case.

(c) BEDSTEADS, CHAIRS, TABLES, FLOORS, DOORS, WOODWORK, WINDOWS, etc., shall be thoroughly washed with soap and hot water.

(d) All bed clothes, pillow slips, sheets, nightgowns, towels and any other cloth or clothing of any kind that has been in contact with the patient shall be disinfected as provided in Section XI B1b.

(e) Milk bottles. (See Section IX K1.)

(f) If a case of communicable disease has to be nursed at home, ALL UNNECESSARY FURNITURE, DRAPINGS, CURTAINS, RUGS, etc., SHOULD BE REMOVED FROM THE ROOM WHERE THE CASE IS

TO BE ISOLATED, especially all furnishings that cannot readily be cleansed and disinfected as described in these Rules and Regulations.

(g) As far as possible only such books, papers, magazines and toys should be given the patient as are of little value. Valuable articles or books that the patient may have handled before he was known to have a communicable disease should be taken in charge by the Local Board of Health to be disinfected immediately, if of such a nature that a disinfectant may be used without injury to them; otherwise, they are to be exposed as completely as possible to air and sunlight in a place where inadvertent contact with them would be impossible, for such length of time (usually not over three weeks) as will satisfy the Local Board of Health that they can no longer be the means of conveying disease.

(h) FUMIGATION. Fumigation with gaseous disinfectants, following infectious diseases, is neither required nor recommended. Fumigation with vapors such as formaldehyde and sulphur has long been regarded as useless by health authorities. Experiments have shown that these gases in larger amounts destroy insects and animals more readily than germs. Dr. Chapin, health officer for nearly 50 years, of Providence, Rhode Island, discarded fumigation in that city as long ago as 1905 for diphtheria, and in 1908 in scarlet fever cases. He observed no increase in the prevalence of these diseases in the years which followed. The cost of fumigation, to be made effective, would be prohibitive in most families. Fumigation, as usually performed, is only a "smell-producing process" and serves but to give people a false sense of security.

What has been said about measures of terminal disinfection in preference to gaseous fumigation, applies to small or large school and other buildings as well as to the home. (See also Chapter III, Disinfection and Disinfectants, p. 68.)

SEC. XII. CARRIERS.

A carrier is a person who, without symptoms of a communicable disease, harbors and disseminates the specific microorganisms.

Carriers may be those developing the disease (incubatory), those who have convalesced from the disease (convalescent) or who discharge germs for years or throughout life (chronic carriers). They may also be Direct or Remote contact carriers according to whether they have been directly in contact with a case or not.

Any person who has been determined to be a carrier of the germs of Asiatic cholera, amebic dysentery, bacillary dysentery, diphtheria, meningococcus meningitis, poliomyelitis (infantile paralysis), typhoid fever or paratyphoid fever shall be subject to the special supervision of the State Department of Health. Every physician and health officer shall report such carriers to the State Department of Health immediately upon their discovery.

RECOGNITION OF TYPHOID CARRIERS.

It is estimated that at least two percent of those who recover from an attack of typhoid fever, become chronic carriers and continue to discharge typhoid organisms in the bowel (or bladder) discharges throughout the remainder of life.

The most opportune time to discover a typhoid carrier, is during and immediately following the period of convalescence. These rules and regulations require that every typhoid fever patient show evidence of freedom from a bacillus carrier state, before being released. (See under Typhoid Fever, page 63, paragraph six.)

Three specimens of the bowel discharges, taken at intervals of about 24 hours, and one specimen of urine, should be collected in feces and urine containers and forwarded promptly to the State Hygienic Laboratory. Care should be taken that not larger than a pea-sized portion of fecal matter be transferred to the bottle which contains a 30 percent solution of glycerine. (When not in use, feces and urine containers should be kept under constant refrigeration.)

Should typhoid bacilli persist in the bowel (or bladder) discharges, additional specimens should be forwarded to the laboratory at intervals of one or two months. An individual who continues to show the presence of typhoid organisms in the bodily discharges a year after recovery from typhoid fever, is classed as a chronic typhoid carrier.

Typhoid carriers are the chief source of infection in connection with active (sporadic or multiple) cases of typhoid fever. Specimens from suspected carriers should be obtained in the same manner as for release following recovery.

Information relative to a typhoid carrier should be regarded as confidential.

SEC. XIII. IMMUNITY.

Immunity is the power of resisting disease. Immunity may be natural or acquired. Acquired immunity may follow an attack of the particular disease or be developed by artificial means of immunization, such as vaccination or inoculation.

For the purpose of these Rules and Regulations persons may be regarded as immune to a disease under the conditions specified for each individual disease as set forth in the detailed information for each disease in the subsequent portion of this book of Rules and Regulations.

SEC. XIV. ISOLATION. (See also Section IX)

In reference to the CASE, "isolation" shall mean the separation of persons or animals presumably affected with disease in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to susceptible persons. Persons ill with placardable diseases must be isolated.

A. In reference to CONTACTS, "isolation" shall be taken to mean the separation of persons who have been exposed to communicable diseases, in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to susceptible persons.

B. In reference to those persons known to be "CARRIERS" of a disease and who are not quaratined, isolation shall be taken to mean the restriction of movement of those persons to their places of residence and

prohibition of their coming in contact with the public in any way or serving the public as food handlers.

C. Any person who is a carrier of the germs of Asiatic cholera, amebic dysentery, bacillary dysentery, diphtheria, meningococcus meningitis, poliomyelitis, typhoid fever or paratyphoid fever, shall be subject to the special supervision of the State Department of Health. In the case of carriers of any of these diseases, Health Officers should ask for special instructions from this Department as to their control.

D. In reference to those diseases classed as PLACARDABLE but not quarantinable and where there is no removal of persons to another dwelling, isolation shall be taken to mean the restriction of the movements of persons to their place of residence and prohibition of their coming in any way in contact with the public.

E. In reference to the MEMBERS of a household, isolation shall be taken to mean the separation of the individual and those waiting on him, from other members of the household, in such a way that all direct contact is impossible.

SEC. XV. DISINFESTING.

By disinfesting is meant any process, such as the use of dry or moist heat, gaseous agents, poisoned food, trapping, etc., by which insects and animals known to be capable of conveying or transmitting infection may be destroyed. (See Chapter IV—Insecticides, page 74.)

SEC. XVI. DELOUSING.

By delousing is meant the process by which a person and his personal apparel are treated so that neither the adults nor the eggs of Pediculus corporis or Pediculus capitis survive. (See Chapter IV—Insecticides, page 74.)

SEC. XVII. RENOVATION.

By renovation is meant, in addition to cleansing, such treatment of the walls, floors, and ceilings of rooms or houses as may be necessary to place the premises in a satisfactory sanitary condition.

SEC. XVIII. EDUCATION IN PERSONAL CLEANLINESS.

A. This phrase is intended to include the various means available to impress upon all members of the community, young and old, and especially when communicable disease is prevalent or during epidemics, by spoken and printed word, and by illustration and suggestion, the necessity of:

(1) Keeping the body clean by sufficiently frequent soap and water baths.

(2) Washing hands in soap and water after voiding bowels and bladder and always before eating or preparing food.

(3) Keeping hands and unclean articles, or articles which have been used for toilet purposes by others, away from mouth, nose, eyes, ears and genital organs.

(4) Avoiding the use of common or unclean eating, drinking, or toilet articles of any kind, such as towels, handkerchiefs, hair brushes, drinking cups, pipes, etc.

(5) Avoiding close exposure of persons, to spray from the nose and mouth, as in coughing, sneezing, laughing, or talking.

SEC. XIX. FUNERALS.

A. Regulations pertaining to funerals are as follows:

1. There shall be no public funeral of any person who has died of any of the following diseases:

Diphtheria (Membranous croup or diphtheritic sore throat)	Meningitis	Cholera
Scarlet Fever (Scarlet rash or scarlatina)	Poliomyelitis (Infantile paralysis)	Glanders
Smallpox	Plague	Anthrax
	Epidemic Encephalitis	Yellow Fever
	Psittacosis	

2. The preceding section shall not be applicable when the deceased died while under isolation and when no person from such isolated area attends the funeral.

3. The persons who have been in the isolated or quarantined area may be released from isolation or quarantine for the purpose of accompanying the body to the cemetery, PROVIDED, that they are furnished with a separate car or carriage from which they do not dismount or leave until they have returned to the isolated area. All persons granted this privilege must keep themselves strictly apart and separate at the cemetery on pain of having committed a misdemeanor before the law.

4. Friends may accompany the body to the cemetery, but it is hereby made the duty of the licensed embalmer to warn such friends that they must not approach nor touch the persons who have just come from the isolated area.

5. Private or religious services may be held in the area under isolation provided that the person conducting such service shall not come in contact either directly or indirectly with any person in that area.

6. It hereby becomes the duty of the Local Board of Health, or in the absence of the Health Officer, it shall be the duty of the licensed embalmer in charge of the funeral, to see that the public is not exposed to any communicable disease by reason of the visit of the persons under isolation, to the cemetery, and it shall be his duty to see that such persons who visit the cemetery shall return at once and re-enter the premises that are under isolation or quarantine, where they must remain until they are released by the Health Officer.

7. Public funerals may be held for persons dead of all diseases other than those enumerated in section 1 under this chapter, unless prohibited by the State or Local Department of Health.

SEC. XX. COMMUNICABLE AND OTHER REPORTABLE DISEASES AND RULES CONCERNING EACH.

Following is an alphabetical list of reportable diseases, together with the Rules and Regulations governing the reporting, investigation, placarding, exclusion from school and public gatherings, isolation, and disinfection, for each individual disease; also the Rules and Regulations governing the handling of persons exposed and carriers, with a few general suggestions as to measures to be adopted to prevent the spread of these diseases and the development of sequelae from them.

ACTINOMYCOSIS *(Lumpy Jaw)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII, Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be ISOLATED? Yes.

6. Must practice CONCURRENT DISINFECTION? Yes, discharges from the lesions must be gathered on bits of cotton, paper or cloth and burned at once. All articles soiled with these discharges must be disinfected as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, of the person, rooms and clothing as provided in Section XI.

What to do with PERSONS EXPOSED

1. Children.

   Children need not be excluded from school.

2. Adults.

   Give full instructions as to means of spread of this disease, pointing out that nasal and bowel discharges and infected material, even uncooked meat from animal cases, may spread infection.

ANKYLOSTOMIASIS *(Hook Worm)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, discharges from the bowels as provided in Section XI.
7. Must perform TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

1. Children.
   Children need not be excluded from school.
2. Adults.
   The attending physician will give full instructions regarding the seriousness and mode of spread of this disease.

General Measures

Eradication of this disease can be obtained by education in personal cleanliness and by installation of proper privies or other sanitary disposal systems.

ANTHRAX

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, through authorization of the Health Officer, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, discharges from the lesions should be collected on bits of cotton or paper and burned at once. All articles soiled with these discharges must be disinfected as provided in Section XI.
7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

What to do with PERSONS EXPOSED

1. Children.
   Children need not be excluded from school.
2. Adults.
   Give full instructions regarding the seriousness of the disease and mode of spread through contact with infected animals, or hides, hair, flesh and feces of infected animals or by inhalation of spores of causative agent.

General Measures

1. Animals dead from Anthrax harbor virulent organisms of the disease and all such animals must be burned at once with a minimum amount of handling.

Farmers should exercise care not to come in direct contact with infected animals, but should secure without delay, the services of a veterinarian.

2. Tanners and wool sorters should wear gloves when handling hides or sorting wool.

3. All shaving brushes before first use should be subjected to a high temperature for sufficient time to destroy all possible anthrax spores in the bristles.

CHANCROID

See Venereal Diseases

CHICKEN POX *(Varicella)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, warning card for a minimum period of 10 days and until complete return of continuity of the skin as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, discharges from lesions, bed clothing and dishes of patient as provided in Section XI.

7. Must practice TERMINAL DISINFECTION? No, thorough cleansing and airing recommended.

What to do with PERSONS EXPOSED

1. Children.
   (a) Children who are immune by having had the disease should not be excluded from school.
   (b) Children who have not had the disease must be excluded from school from the tenth to the twentieth day after the first exposure except when under daily inspection of School Nurse, Health Officer or other Physician.
2. Adults.
   No restrictions for exposures.

General Measures

Great care should be exercised in diagnosis, as cases thought to be chicken pox in persons over 15 years of age, or at any age during an epidemic of smallpox, are to be investigated to make certain that they are not cases of smallpox.

CHOLERA

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be ISOLATED? Yes.

6. Must practice CONCURRENT DISINFECTION? Yes, Discharges from bowels, vomited matter, and articles soiled thereby, and the hands should be disinfected, as described in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes. Bodies of those dying should be cremated or cared for as provided in Section XI.

What to do with PERSONS EXPOSED

The attending physician shall give full instructions regarding the seriousness of the disease and mode of spread.

The State Department of Health should be notified at once if a case is discovered or suspected.

DENGUE

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? No.

7. Must perform TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

Children need not be excluded from school or public gatherings.

General Measures

Screen rooms. Destroy mosquitoes.

DIPHTHERIA

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? Yes, as provided in Section IX.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

TERMINATION OF QUARANTINE shall not be made until:

(1) A MINIMUM OF FOURTEEN DAYS from the establishment of the quarantine, or, if the date of onset was reported at the time of the original report of the case, the period of quarantine may be reckoned from that date, and

(2) Until two successive cultures, taken not less than 24 hours apart, from the nose and throat fail to show the presence of diphtheria bacilli, and

(3) Until the attending physician reports complete clinical recovery, and

(4) Until all measures authorized as terminal disinfection by the State Department of Health are carried out to the satisfaction of the Local Board of Health.

(5) In case where two consecutive negative cultures are not obtained the diphtheria quarantine MAY be terminated by action of the Local Board of Health on the 28th day of quarantine and the patient isolated as a DIPHTHERIA CARRIER.

6. If the case terminates with the death of the Patient, sections (1), (2) and (3) do not apply. Contacts must be controlled as specified under "what to do with contacts."

RELEASE OF PERSONS BEFORE TERMINATION OF QUARANTINE

1. THE CASE. The person around whom the quarantine is established shall be released only as specified above except when specifically approved by the State Department of Health.

2. ADULTS NOT ILL WITH THE DISEASE may be instructed, disinfected and released to live elsewhere after they have had ONE negative culture, IF such release is approved by the Local Board of Health.

3. SCHOOL CHILDREN KNOWN TO BE IMMUNE. Children of school age or less than school age who are immune as herewith defined may be released on the same basis as adults.

Immunity may be produced:

(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the Local Board of Health at the time of the illness. Those who have to do with diphtheria should remember that having had the disease frequently fails to produce immunity. The status of immunity is best determined by the Schick test.

(b) By the use of 1,000 units of diphtheria antitoxin, not more than three weeks having elapsed since the inoculation.

(c) By a natural immunity acquired otherwise than through an attack of the disease and as revealed by a negative Schick test.

(d) By administering treatment with one of the diphtheria preventive agents, followed by a negative Schick test.

4. SCHOOL CHILDREN NOT KNOWN TO BE IMMUNE. Children of school age or less than school age who are susceptible as defined in Section IV may be released before the termination of a diphtheria quarantine only to be isolated in another dwelling where there is NO case of diphtheria and where there are NO other children of school age or less than school age. School children so isolated may be released from this isolation after ONE WEEK provided cultures from the nose and throat fail to show the presence of diphtheria bacilli, and they have no clinical manifestations of the disease, and they may then return to school, provided further, that they remain in the place of second abode throughout the quarantine period of the case.

It is recommended that all susceptible children be immunized by the use of one of the accepted diphtheria preventive agents.

WHAT TO DO WITH THE CONTACTS

1. Contacts in the home.

May be released as provided in the preceding section. Those not known to be immune who remain in quarantine with the patient should receive prophylactic inoculation with antitoxin, and such other measures as recommended by the attending physician.

2. Contacts at school.

When it is found that a case of diphtheria has attended school, it is advised that children and employees of the room or small school should have throat cultures made immediately. School boards CAN require this in order to protect the health of the children whom they require to attend their school.

Local Boards of Health CAN require this when the school situation is such that it threatens the health of the general public.

As a result of such general culture examination of a school, all children and employees who were found free from diphtheria bacilli should continue school as usual, unless they are living in the home of a diphtheria case or carrier. All others should be excluded from school until ONE culture of the nose and throat fails to reveal diphtheria bacilli. During this period of exclusion, they must be handled as diphtheria carriers. See Section XII.

3. Contacts in public.

All exposed persons not specifically named in the above regulations at the discretion of the Local Health Officer, depending on age, occupation, degree of exposure, etc., may be instructed and released; or may be isolated and kept under observation until they themselves and the public shall be safe from the disease; or they may be quarantined until released in accordance with these rules and regulations.

Persons knowing that they have been in contact with a case of diphtheria in public should call their family physician immediately on the first indication of any (1) rise of temperature, (2) sore throat, (3) or indisposition of any sort. Every case of diphtheria is likely to develop within SEVEN DAYS after the initial contact with an infectious person or thing.

Diphtheria preventive agents are recommended for the establishment of active and enduring immunity against diphtheria.

WHAT TO DO WITH THE CARRIERS

When diphtheria bacilli are found in the nose and throat of persons who have none of the clinical manifestations of the disease, they shall be deemed DIPHTHERIA CARRIERS. No convalescent case shall be deemed a Diphtheria Carrier earlier than 28 days after the case is reported to the Local Board of Health.

1. Restrictions on Carrier.

(a) Diphtheria carriers must be isolated in their own homes and not come in contact in any way with the public.

(b) Diphtheria carriers must not attend any public or private school, church, picnic or public gatherings of any kind.

(c) Diphtheria carriers must not handle food or dairy products offered for sale.

(d) Diphtheria carriers must live in a residence having a placard, "Diphtheria Carrier."

(e) Diphtheria carriers may be released and readmitted to school on ONE negative culture except carriers convalescent from the disease. They require TWO negative cultures.

(f) Diphtheria carriers should be quarantined, ONLY if they violate the instructions to isolate themselves from the public.

(g) When carriers who are convalescing from diphtheria continue to give positive cultures longer than five days after recovery from the disease, a virulence test may be made to determine the virulence or non-virulence of the organism. If the organism is avirulent the case may be released, at once; if virulent or if no virulence test is practicable the Local Board of Health may allow restricted release wherein the carrier agrees to comply with the restrictions imposed and named in subsections 2 and 3 of this section, and in addition, to report at least weekly to his physician for cultures and treatment to end the carrier state.

(h) When carriers are discovered through general culturing of individuals or groups of persons, if at the end of one week of local treatment by the physician cultures are still positive, a virulence test should be made. If the test is negative the person may be released at once, whereas if positive or if a virulence test is not practicable the individual may be released on the same conditions as outlined above for convalescent carriers.

(i) Virulence tests will be done by the State Hygienic Laboratory upon request of the physician sending the culture.

2. Restrictions on other persons living in the home with a diphtheria carrier.

(a) Adults. Must have throat cultures taken. May come and go from the house as usual.

(b) Children. School children living in contact with a carrier shall be excluded from school as long as the carrier. If these children go to another home to live, or have no contact with the case in their own home, they may be readmitted to school as soon as they have had ONE negative culture, if this is approved by the Local Board of Health.

3. Advice to Diphtheria carriers.

(a) Sprays, gargles, swabbing and similar forms of treatment have in many cases assisted in bringing to a termination the carrier state.

(b) Diphtheria carriers should exercise in the open air and sunshine but in doing so must have no contact with persons not belonging to the home group with whom they are regularly associated.

(c) The resistant carrier state is often overcome by enucleation of adenoids or tonsils, when infected and enlarged or by other remedial measures for abnormal conditions of the nose and throat.

General Measures

1. Pasteurization of milk supply.

2. Application of the Schick test to all especially exposed persons, such as nurses and physicians, and active immunization of all susceptibles, but not within three weeks after the administration of antitoxin.

3. Active immunization of all children by the end of the first year without prior Schick testing; active immunization of school children with or without prior use of the Schick test.

4. Determination of presence or absence of carriers among contacts and, so far as practicable, in the community at large.

DYSENTERY *(Amebic and Bacillary)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes. Disinfect the bowel discharges as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? No. But cleaning advised.

What to do with PERSONS EXPOSED

Attending physician should give full instructions regarding seriousness and mode of spread of this disease.

General Measures

1. Boil drinking water and protect food and water from contamination.

2. Dairy products must not be removed from the premises where a case of dysentery (amebic or bacillary) exists except as provided in Section IX.

3. Education in personal cleanliness. Special care with bowel discharges, the same as for typhoid fever.

EPIDEMIC ENCEPHALITIS *(Sleeping Sickness)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided by Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? Yes, as provided in Section IX.

6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from the nose and throat and all soiled articles should be disinfected immediately.

7. Must practice TERMINAL DISINFECTION? Yes, as provided in Section XI.

Termination of Quarantine

Quarantine for Epidemic Encephalitis shall not be terminated until:

(1) A minimum period of twenty-one days, and

(2) Until seven days of normal temperature, and

(3) Until the attending physician reports complete clinical recovery, and

(4) Until all measures authorized as terminal disinfection by the State Department of Health are carried out to the satisfaction of the Local Board of Health.

(5) Any case of Epidemic Encephalitis may be released after twenty-one days in quarantine on approval of the Local Board of Health.

(6) If the disease terminates with the death of the patient, sections (1), (2), and (3) do not apply. Contacts must still be controlled as specified in paragraph (3) below.

Release of Persons Before the Termination of Quarantine

(1) THE CASE. The person around whom a quarantine is established shall be released only as specified above except when specifically approved by the State Department of Health.

(2) MATURE ADULTS not belonging to the young adult, children of school age or less than school age group and NOT ILL WITH THE DISEASE may be instructed, disinfected and released to live elsewhere, IF such release is approved by the Local Board of Health.

(3) All young adults, children of school age and under school age whether they have had Epidemic Encephalitis or not may be released before the termination of quarantine only to be isolated in another dwelling where there is no case of Epidemic Encephalitis and where there are no young adults, children of school age or less than school age. Young adults, children of school age or less than school age thus isolated may be released after TEN DAYS in the second isolation provided they have no manifestations of the disease and pupils may then return to school, provided that such contacts remain in the place of second abode throughout the quarantine period of the case.

General Measures

Medical care and careful nursing of the case are indispensable.

Carriers may exist when disease is prevalent.

ERYSIPELAS

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section VIII.

7. Must perform TERMINAL DISINFECTION? No. Cleansing and airing recommended.

What to do with PERSONS EXPOSED

The physician in attendance will give full instructions regarding the means of spread.

GERMAN MEASLES *(Rotheln)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X. Minimum period, 5 days.

What to do with PERSONS EXPOSED

1. Children.

(a) Children who are immune by having had the disease, should not be excluded from school.

(b) No restrictions on susceptible children unless suspected of having the disease.

2. Adults.

No restrictions for exposure.

General Measures

This disease in the early stages may be confused with scarlet fever.

GLANDERS

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, disinfect discharges from nose and mouth, dishes, hands and bed clothing, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, air, sunshine and cleansing as provided in Section XI.

What to do with PERSONS EXPOSED

Children need not be excluded from school or public gatherings. Physician in charge must give full instructions regarding danger and mode of spread of the disease, also disposal of discharges and soiled articles.

General Measures

Horses may be a source of infection and infected or suspected horses should be quarantined; skin contact with the lesions in the living or dead body (animal or man) is to be scrupulously avoided.

GONORRHEA

See Venereal Diseases

GRANULOMA INGUINALE

See Venereal Diseases

IMPETIGO, *Contagiosa*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from the sores should be collected on cotton or gauze and burned. All articles soiled with these discharges should be disinfected as described in Section XI.

What to do with PERSONS EXPOSED

Children need not be excluded from school unless themselves infected. No restriction on adults.

General Measures

The infected person should avoid auto-inoculation by scratching, and should have separate towels and toilet articles. Education in personal cleanliness is essential.

Unless properly controlled, impetigo will readily affect several children in a nursery, school or other institution. Impetigo is very disturbing when it occurs in a nursery. Young children are most susceptible and the disease is sometimes fatal to infants. Constant vigilance and rigid isolation precautions are indicated in nursery wards, lest infection be introduced by visiting children or other persons.

An infected school child should be excluded from school until the attending physician reports the condition as non-infectious. The services of a school or community nurse form an essential part in the administrative control of impetigo, along with that of other communicable diseases.

INFLUENZA, EPIDEMIC

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by the Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? Only if so decided by the Local Board of Health.
4. Must be EXCLUDED FROM SCHOOL and public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from nose and throat should be collected on cotton or gauze and burned. All articles soiled with these discharges must be disinfected as described in Section XI.

7. Must perform TERMINAL DISINFECTION? Cleaning and airing are recommended.

What to do with PERSONS EXPOSED

1. Children. Children need not be excluded from school unless themselves infected.

2. Adults. No restrictions, but if in immediate contact with a case should avoid contact with other persons.

General Measures

Special care should be taken to avoid contact with possible cases and special care to sterilize all eating utensils.

LEPROSY

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes. Disinfect discharges and articles soiled with discharges as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, a thorough cleansing of premises of the patient is necessary.

Cases of leprosy should be sent to the national leprosarium at Carville, La.

What to do with PERSONS EXPOSED

Children are not excluded from school and public gatherings.

LYMPHOGRANULOMA INGUINALE

See Venereal Diseases

MALARIA

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? No.

Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? No. Exclude and destroy the Anopheles mosquitoes.

7. Must perform TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

CHILDREN need not be excluded from school and public gatherings.

General Measures

1. The administration of prophylactic doses of quinine should be insisted upon for those in danger of exposure.
2. Mosquitoes should be excluded and destroyed. Screens should be kept in good condition.
3. Breeding grounds for mosquitoes should be eradicated.
4. Blood smears should be examined for material plasmodia before beginning quinine treatment.

MEASLES *(Morbilli)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? Yes, a warning car for a minimum period of 10 days after onset of illness of the last case in the home and until complete clinical recovery.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X. MINIMUM PERIOD, 10 days.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, discharges from nose and throat, and all bed clothing and dishes, as provided in Section XI.
7. Must perform TERMINAL DISINFECTION? No, thorough cleansing and airing recommended.

What to do with PERSONS EXPOSED

1. Children.

(a) Children who are immune by having had measles should not be excluded from school. Status of immunity to be obtained from parent or guardian, attending physician, local health or school records.

(b) Children who are susceptible, as defined in Section IV, must be excluded from school from the SEVENTH to the SEVENTEENTH day after the first exposure, except when under daily inspection of school nurse, health officer or other physician.

2. Adults.

No restriction for exposures except for susceptible teachers or others who have to do with large groups of young children.

General Measures

1. Guard carefully against pneumonia and tuberculosis.
2. Daily examinations of exposed children and of other possibly exposed persons. This examination should include record of the body temperature. A non-immune exposed individual exhibiting a rise of temperature to 99.5° F. or higher should be promptly isolated pending diagnosis.

3. Schools should not be closed or classes discontinued where daily observation of the children by a physician or nurse is provided for.

4. Education as to special danger of exposing young children to those exhibiting acute catarrhal symptoms of any kind.

5. In institutional outbreaks immunization with convalescent serum of all minor inmates who have not had measles is of value in checking the spread of infection and in reducing mortality.

6. The use of parental whole blood, convalescent serum or other approved biological product for known contacts, is recommended. This will prevent measles or (preferably), permit a mild attack which will render the child immune to a future attack of the disease.

MENINGOCOCCUS MENINGITIS *(Epidemic Meningitis)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED from school? Yes, as provided in Section X.

5. Must be QUARANTINED? Yes, as provided in Section IX.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

TERMINATION OF QUARANTINE

Quarantine shall not be terminated until:

(1) A MINIMUM OF FOURTEEN DAYS from the onset of the disease, and preferably until two nasopharyngeal cultures taken after recovery, 24 hours apart, do not reveal the diplococcus intracellularis meningitidis, and

(2) Until the attending physician reports complete clinical recovery, and

(3) Until all measures authorized as terminal disinfection by the State Department of Health are carried out to the satisfaction of the Local Board of Health.

(4) Any case of meningitis may be released after twenty-eight days in quarantine on approval of the Local Board of Health.

(5) If the case terminates with the death of the patient, sections (1) and (2) do not apply.

RELEASE OF PERSONS BEFORE THE TERMINATION OF QUARANTINE

(1) THE CASE. The person around whom a quarantine is established shall be released only as specified above except when specifically approved by the State Department of Health, but in no case in less than fourteen days.

(2) Mature adults not belonging to the young adult, children of school age or less than school age groups, and NOT ILL WITH THE DISEASE, may be instructed, disinfected and released to live elsewhere, provided they

have no evidence of infection but preferably if two nasopharyngeal cultures be taken 24 hours apart and be found negative to the diplococcus intercellularis meningitidis and if such release is approved by the Local Board of Health.

(3) All young adults, school pupils, and children under school age whether they have had cerebrospinal meningitis or not, may be released before the termination of quarantine only to be isolated in another dwelling where there is no case of meningitis and where there are no young adults, children of school age or less than school age, provided they have no evidence of infection but preferably if two nasopharyngeal cultures, taken 24 hours apart, do not reveal the diplococcus intracellularis meningitidis. Young adults, school pupils, and children under school age thus isolated may be released after ONE WEEK in this second isolation, provided they have no manifestations of the disease and pupils may then return to school.

(4) School children who have not previously had the disease and who have remained in quarantine with the case must not attend school for one week after the termination of quarantine.

(5) Carriers should be quarantined until the nasal and pharyngeal secretions are proved by bacteriological examination to be free from the infecting organism, when such examination is practicable.

General Measures

1. Search for carriers among families and associates of recognized cases by bacteriological examination of posterior nares of all contacts.

2. Education as to personal cleanliness and necessity of avoiding contact and droplet infection.

3. Prevention of overcrowding such as is common in living quarters, transportation conveyances, working places, and places of public assembly in the civilian population, and in inadequately ventilated closed quarters in barracks, camps, coal mines and ships.

Epidemic Measures

1. Increase the separation of individuals and the ventilation in living and sleeping quarters for such groups of people as are especially exposed to infection because of their occupation or some necessity of living conditions. Bodily fatigue and strain should be minimized for those especially exposed to infection.

2. Carriers should be quarantined until the nasal and pharyngeal secretions are proved by bacteriological examination to be free from the infecting organism.

MUMPS *(Parotitis)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, a warning card for MINIMUM

PERIOD of 14 days and until glandular enlargement and tenderness have disappeared, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI. All discharges from the nose and mouth. Also bed clothing and dishes used by patient must be disinfected.

7. Must perform TERMINAL DISINFECTION? No, thorough cleansing and airing recommended.

What to do with PERSONS EXPOSED

1. Children.

(a) Children who are immune by having had mumps should not be excluded from school.

(b) Children who are susceptible as defined in Section XII, must be excluded from school from the fifteenth to twenty-second day after first exposure, except when under daily inspection of a School Nurse, Health Officer or other Physician.

2. Adults.

No restrictions for exposures; inspection of susceptible persons recommended.

OPHTHALMIA NEONATORUM

INCLUDING Pink Eye but excluding Trachoma.

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, discharges to be gathered on bits of cotton or gauze and burned immediately. All articles soiled with these discharges must be disinfected as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? No. Cleansing is recommended.

What to do with PERSONS EXPOSED

1. CHILDREN need not be excluded from school, unless themselves suspected of infection.

2. The seriousness of this disease must be impressed upon everyone coming in contact with the patient. Where 24 hours nursing service is not available cases should be removed to hospitals where adequate nursing service can be given. The strictest precautions must be observed regarding all infectious discharges and everything that might be soiled with these discharges. All visible discharge must be collected on bits of cotton, paper

or cloth and burned at once. All bed clothing, pillow slips, sheets, towels and instruments used in taking care of the case must be washed and boiled before being used by other persons.

General Measures

1. Silver nitrate 1 per cent solution or ARGYROL 10 per cent solution has been approved by the State Department of Health for the prevention of this disease. Except in special cases it is required by law that one of these prophylactics be used in the eyes of each child born in this state. Silver nitrate for this purpose will be supplied free by the State Department of Health to obstetricians and maternity hospitals.

PARA-TYPHOID FEVER

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, discharges from the bowels and bladder as provided in Section XI.
7. Must perform TERMINAL DISINFECTION? No. Cleaning recommended. Special care in cleansing the hands should be exercised by all convalescents and persons who have had typhoid or para-typhoid fever.

Clinical cases of para-typhoid fever shall not be released until free from infection, and shall not be considered free from infection until two laboratory examinations of specimens of both feces and urine collected not less than 24 hours apart show the absence of the infecting organisms.

Persons shall be regarded as immune:

(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the Local Board of Health at the time of the illness.

(b) By the inoculation of 2½ billion of dead para-typhoid bacilli (A and B) given in three divided doses one week apart, not more than two years having elapsed since the inoculation.

What to do with PERSONS EXPOSED

1. Children.

School children need not be excluded from school.

2. Adults.

The attending physician shall give full instructions regarding the seriousness of this disease, its mode of spread and the value of typhoid and para-typhoid vaccine as a prophylactic. Flies should be excluded from the sick room.

General Measures

1. Protection and purification of public water supplies.
2. Pasteurization of public milk supplies.

3. Supervision of other food supplies, especially meat products, and of food handlers.
4. Prevention of fly breeding.
5. Sanitary disposal of human excreta.
6. Extension of immunization by vaccination as far as practicable.
7. Supervision of para-typhoid carriers and their exclusion from the handling of foods. See Section XII.
8. Systematic examination of specimens of feces and urine from those who have been in contact with recognized cases, to detect carriers.
9. Abstaining from the use of suspected milk supplies pending discovery of the personal or other cause of contamination of the milk.
10. Abstaining from the use of water supply, if contaminated, until adequately treated with hypochlorite or other disinfectant, or unless all water used for toilet, cooking, and drinking purposes is boiled before use. See Chapter III.

PEDICULOSIS *(Head-lice)*

Pediculosis is caused by the head louse (Pediculosis capitis) which lives a parasitic existence on the scalp of infested children and older persons. Eggs or nits are deposited on the shafts of hair; after emerging from the nit, the louse passes through three nymphal stages in growth to maturity. The condition is chiefly characterized by itching.

School children with head-lice or nits should be excluded from school until no live lice or nits can be found on thorough inspection.

A physician should be consulted for proper treatment. The services of a school or community nurse are of value in carrying out physician's instructions and control measures among school children.

PELLAGRA

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? No.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, any secretions or discharges from the mouth should be disposed of in a sanitary way.
7. Must perform TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

No restrictions on exposed persons.

General Measures

This disease is due to dietary deficiency.

It is a serious disease as it sometimes affects the nervous system.

As a preventive an ample diet of fresh meat and milk is effective.

PLAGUE *(Bubonic, septicemic, pneumonic)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? Yes, as provided in Section VIII.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? Yes, as provided in Section IX.
6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.
   (a) Very important to disinfect the discharges from the lesions in the lungs or glands. These discharges must be received on bits of cotton, paper or cloth and BURNED AT ONCE.
   (b) All articles soiled with these discharges must be disinfected immediately as provided in Section XI.
7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

General Measures

1. Examination of rats and squirrels for infection among these animals. Rat disinfesting and vermin extermination campaigns by use of known methods for their destruction; destruction of rats on ships arriving from infected ports; quarantine of areas where the infection persists.
2. Supervision of autopsies of all deaths during epidemics.
3. Supervision of the disposal of the dead during epidemics, whether by burial, transfer, or holding in vault, whatever the cause of death.
4. Cremation, or burial in quicklime, of those dying with this disease.

The Federal Department of Agriculture has available bulletins on Rat Extermination, which may be obtained by applying to that Department.

PNEUMONIA *(Broncho or Croupous and Lobar)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATON OF REPORTS by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from nose and throat should be collected on cotton or gauze and burned. All articles soiled with these discharges must be disinfected as described in Section XI.

What to do with PERSONS EXPOSED

1. Children. Children need not be excluded from school.
2. Adults. Advise chest examinations, in suspected cases.

Control Measures

Great advances in the effective control of pneumonia have been made possible through the discovery that there are thirty or more different members in the pneumococcus family of germs; that the type of pneumonia can be accurately determined with immune (rabbit) serum through the use of the Neufeld method, and that type specific anti-pneumococcic serum is being made available for the successful treatment of the various types of pneumonia.

Control measures include the following:

1. Complete reporting of cases of pneumonia and broncho-pneumonia including the type of pneumococcus found to be causing the disease.
2. Prompt medical care and early diagnosis through the use of the Neufeld method (affecting sputum specimens, lung exudate, blood cultures), carried out in hospital and public health laboratories.
3. Early and adequate use of proper curative serum.
4. Facilities for administration of oxygen therapy.
5. Cooperation with the State Department of Health, on the part of attending physicians, health officers, hospital officials and pharmacists, in the distribution of curative anti-pneumococcic serum.
6. Adequate medical, nursing and hospital care.

General Measures

In institutions and camps, when practicable, people in large numbers should not be congregated closely within doors. The general resistance should be conserved by good feeding, fresh air, and other hygienic measures.

POLIOMYELITIS *(Infantile Paralysis)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? Yes, as provided in Section VIII.
4. Must be EXCLUDED FROM SCHOOL? Yes, as provided in Section X.
5. Must be QUARANTINED? Yes, as provided in Section IX.
6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.
7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

TERMINATION OF QUARANTINE

Quarantine for acute Poliomyelitis shall not be terminated until:

(1) A minimum period of twenty-one days, and

(2) Until seven days of normal temperature, and

(3) Until the attending physician reports complete clinical recovery, and

(4) Until all measures authorized as terminal disinfection by the State Department of Health are carried out to the satisfaction of the Local Board of Health.

(5) Any case of acute Poliomyelitis may be released after twenty-eight days in quarantine on approval of the Local Board of Health.

(6) If the disease terminates with the death of the patient, sections (1), (2), and (3) do not apply. Contacts must still be controlled as specified in paragraph (3) below.

RELEASE OF PERSONS BEFORE THE TERMINATION OF QUARANTINE

(1) THE CASE. The person around whom a quarantine is established shall be released only as specified above except when specifically approved by the State Department of Health.

(2) MATURE ADULTS not belonging to the young adult, children of school age or less than school age group and NOT ILL WITH THE DISEASE may be instructed, disinfected and released to live elsewhere, IF such release is approved by the Local Board of Health.

(3) All young adults, children of school age and under school age whether they have had acute Poliomyelitis or not may be released before the termination of quarantine only to be isolated in another dwelling where there is no case of acute Poliomyelitis and where there are no young adults, children of school age or less than school age. Young adults, children of school age or less than school age thus isolated may be released after TEN DAYS in the second isolation provided they have no manifestations of the disease and pupils may then return to school, provided that such contacts remain in the place of second abode throughout the quarantine period of the case.

General Measures during epidemics:

1. Search for and examination of all sick children should be made.
2. All children with fever should be isolated pending diagnosis.
3. Education in such technique of bedside nursing as will prevent the distribution of infectious discharges to others from cases isolated at home.
4. Convalescent serum, administered in the pre-paralytic stage of the disease, is used frequently and may be of value.
5. All patients should be hospitalized whenever possible.
6. Detailed information for the after-care of paralyzed cases may be procured from the State Department of Health.

PSITTACOSIS *(Parrot Fever)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases to be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI. Sputum of patient and articles soiled therewith should be disinfected.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

Special Measures

1. Investigation of source of infection in parrots, parrakeets and other birds of the parrot family.
2. Inquiry regarding history of exposure to such birds.
3. Quarantine of premises which house infected birds, until measures of disinfection have been carried out.

General Measures

1. All shipments of birds of the psittacine or parrot family into the state must be accompanied by a certificate from the state health officer of the point of origin, indicating that to the best of his knowledge and belief, the birds are free from any evidence of psittacosis infection.
2. Birds of the species concerned to be at least eight months old before being shipped in interstate commerce.
3. Inspection of aviaries.

RABIES *(Hydrophobia)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI. Saliva of patient and articles soiled therewith should be disinfected.
7. Must perform TERMINAL DISINFECTION? No. Airing and cleansing recommended.

What to do with PERSONS EXPOSED

Pasteur Treatment should be given promptly if they have been bitten by an animal known to be rabid. Delay is dangerous, particularly with injuries to head or neck. Lapping or biting constitutes exposure. All bites or lacerations should be cauterized within 24 hours with fuming nitric acid.

General Measures

1. Detention for at least 10 days, of dogs suspected of being rabid, under observation of veterinarian.
2. Vaccination of dogs against Rabies may be helpful.
3. Restrict all dogs to leash or chain.
4. Impound or kill all stray dogs.
5. Report all dog-bites in humans or animals.

RHEUMATIC FEVER *(Acute)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? No.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from nose and throat should be disinfected.
7. Must practice TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

No restrictions on exposed persons.

General Measures

All persons should remember that while acute rheumatism is not highly contagious it is nevertheless regarded by some as a communicable disease, and all precautions as to personal hygiene should be taken to prevent spread of the disease.

Special care should be given to all cases of tonsillitis and to all repeated attacks of sore throat.

Prevention of or proper care of Rheumatic cases may prevent subsequent Heart disease.

RINGWORM *(Favus)*

Including Epidermophytosis, so-called Athlete's Foot or Gymnasium Foot

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, if lesions are active and not properly dressed.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI. Disinfect toilet articles of patient. Collect discharges from lesions on bits of cotton, paper or cloth and burn immediately.
7. Must perform TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

Children. Children need not be excluded from school and public gatherings.

General Measures

1. Avoid the use in common, of hair brushes, combs or articles of wear.
2. Persons with ringworm of feet or "athlete's foot" to remain away

from locker rooms, gym floors or swimming pools until lesions are healed.

3. Careful supervision over and daily disinfection of locker room, shower room floors and swimming pool runways. Foot baths may serve a useful purpose in mechanically removing the ringworm fungus from the skin.

ROCKY MOUNTAIN SPOTTED FEVER

Snyonyms: Spotted Fever, Mountain Fever

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.
2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.
3. Must be PLACARDED? No.
4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.
5. Must be QUARANTINED? No.
6. Must practice CONCURRENT DISINFECTION? No.
7. Must perform TERMINAL DISINFECTION? No.

Recognition of the Disease

Early symptoms and signs include fever, chill, headache, backache, leg pains, prostration, gastric discomfort, anorexia and epistaxis. A macular rash appears on the third to fifth day of illness, beginning characteristically on wrists and ankles and later generalized. History of tick bite or direct exposure with ticks aids in the diagnosis. The laboratory also plays an important part in establishing the diagnosis through performance of the agglutination test (Weil-Felix reaction) on serum specimens. Blood tests should be repeated if necessary as laboratory findings may not be positive before 14 days after onset of illness.

General Measures

1. Avoid direct exposure to ticks, tick juice and tick bites, insofar as possible.
2. If exposed, in tick-infested areas, inspect body frequently for presence of ticks.
3. Avoid direct contact with ticks found on dogs and other animals.
4. Protect legs with tick-proof clothing.
5. Eradicate ticks by burning grass and brushwood.
6. Keep grass cut in public parks and playgrounds.
7. Destroy rodents such as ground squirrels, chipmunks, rabbits and field mice.
8. Prophylactic vaccine to protect against unavoidable, repeated exposure.

SCABIES *(Itch)*

Scabies is an eruption caused by the itch mite (Acarus scabiei). The condition is readily communicable to those in the family, to others in school.

Children with scabies should be excluded from school until the school or attending physician pronounces the condition no longer communicable.

*SCARLET FEVER—WITH OR WITHOUT RASH

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. Must be INVESTIGATED? Yes, under conditions outlined in Section III, paragraphs 5 and 6.

3. Must be ISOLATED? Yes, for a minimum period of 21 days from onset of illness.

4. Must be PLACARDED? Yes, as provided in Section VIII.

5. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from the nose and throat, also bed clothing and dishes should be distinfected, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

TERMINATION OF ISOLATION

Note: It should be emphasized that scarlet fever may exist without as well as with a rash, that the so-called mild cases are infective, and that complications may develop in them as late as the third week. For these reasons all cases whether mild or severe must be controlled for a minimum period of 21 days if the public health is to be safeguarded.

Isolation shall not be terminated before:

1. A minimum of twenty-one days from the establishment of isolation, or if the date of onset does not antedate by over 72 hours, the day of report of the case, the Health Officer, or, in the absence of such officer, the Local Board of Health may reckon the period of isolation from the date of onset of illness;

2. All discharges from suppurating glands and ears have ceased and the throat appears normal;

3. The attending physician reports complete clinical recovery, and

4. All measures authorized as concurrent and terminal disinfection by the State Department of Health (see Section XI) are carried out in a satisfactory manner.

5. If the disease terminates with the death of the patient, Sections (1), (2), and (3) do not apply.

6. When there is discharge from nose, throat, ears or glands at the end of the 21 day period, isolation, particularly in the case of school children, must be extended for an additional week and longer if deemed necessary by the attending physician, school physician or health officer.

RELEASE OF PERSONS BEFORE THE TERMINATION OF ISOLATION

1. THE CASE. The patient who is in isolation shall be released only as specified above, except when specifically approved by the State Department of Health.

*NOTE: It is urged that the term "scarlatina" be abandoned and that all cases, regardless of whether mild or severe be classed as scarlet fever.

2. CHILDREN NOT KNOWN TO BE IMMUNE.

Children of school age or less than school age who are susceptible may be released before the termination of isolation, only to be isolated in another dwelling where there is no case of scarlet fever and where there are no children of school age or less than school age. School children thus isolated may be released after one week in this second isolation, provided they have no clinical manifestations of the disease; they may then return to school.

Children who remain in the home where there is scarlet fever shall not return to school until after the patient (s) and premises have been released from isolation. This rule applies also in relation to the following section, 3 (a), (b) and (c).

3. CHILDREN KNOWN TO BE IMMUNE.

(a) Children who are known to have had scarlet fever at some previous time and this fact has been made a matter of record with the district, county or local health officials, may be released to live elsewhere. Such school children may return to school on the third day after last exposure.

(b) Children who have been given active immunization treatment in accordance with a method recognized by standard public health practice and at least two weeks have elapsed since the treatments were completed, may be released to live elsewhere and may return to school on the third day after last exposure.

(c) Children who have had a negative Dick test may be released to live elsewhere and may return to school on the third day after last exposure.

4. ADULTS NOT ILL WITH THE DISEASE.

(a) The breadwinner or other adult in the home under isolation, may be allowed to enter and leave the premises to continue work, provided that he does not come in direct contact with the patient(s). There should be reasonable certainty that such person is immune, (through previous attack, negative Dick test, active or passive immunization, or negative throat culture).

(b) If facilities for isolation of the patient are unsatisfactory, or if there is failure to cooperate in observing isolation precautions, the breadwinner or other adult should be instructed and released to live elsewhere.

(c) The breadwinner, if a handler of dairy products or of ready-to-eat foods, should be instructed, released to live elsewhere and not resume work until one week after last exposure to the patient. If there is evidence of immunity as stated in paragraph (a), work may be resumed on the third day after last exposure.

(d) School teachers and others who come in contact with groups of children, should be instructed, released to live elsewhere and not resume work until one week after last exposure to the patient. If there is evidence of immunity as stated in paragraph (a), employment may be resumed on the third day after last exposure.

FURTHER CONTROL AND PREVENTIVE MEASURES

1. Cases without rash.

All patients with symptoms and signs resembling scarlet fever, WITH OR WITHOUT THE RASH, should be isolated for 21 days, the same as for the typical scarlet fever case.

2. The Dick Test.

The intradermal skin test with scarlet fever toxin (Dick test), is of value in determining susceptibility to or immunity against scarlet fever.

3. Throat cultures.

A throat culture, taken with a sterile swab (such as that provided for diphtheria) may prove useful in determining whether illness (or a carrier state) is due to the hemolytic streptococcus, the causative germ of scarlet fever and related infections.

4. Convalescent Scarlet Fever Serum.

Convalescent or human immune serum, obtained from persons recently recovered from scarlet fever, is of definite value in lessening the severity of the disease and the danger of serious complications. This serum confers passive or temporary immunity and nearly always prevents an attack of scarlet fever in persons who have been exposed.

5. Active Immunity.

Active immunity, an immunity against scarlet fever of longer duration, usually follows immunization with purified scarlet fever toxin. Active immunization is advised for susceptible persons such as nurses, school children and others who are likely to be exposed to scarlet fever.

6. The School Group.

(a) When a pupil has attended school while in an infectious state of scarlet fever, it must be presumed that all the pupils in the room or small school have had contact with the case.

(b) All contacts in a school should be examined daily at the opening of school, preferably by a registered school or public health nurse, and all pupils (or teachers) EXCLUDED FROM SCHOOL who have any of the signs or symptoms which MAY be signs or symptoms of scarlet fever.

(c) During the period of prevalence of scarlet fever, parents should call the attending physician on the first show of (i) rise of temperature, (ii) sore throat, or (iii) indisposition of any kind.

(d) Closing of schools is not advised (see Section X, B. page 20).

7. The Public Milk Supply.

(a) For isolation precautions on a dairy farm, see Section IX, L, page 19.

(b) When several cases of scarlet fever occur in a community, with onset at the same time, investigation should be made to exclude the possibility of spread of scarlet fever through raw milk or raw dairy products. If a milk supply is suspected, delivery of milk should be stopped pending further investigation and the situation reported to the State Department of Health.

(c) Pasteurization of raw dairy products is urged as an added safeguard against disease transmission.

SEPTIC SORE THROAT

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by the Local Health Officer and Local Board of Health? Yes, as required in Section III.

3. Must be ISOLATED? Yes.

4. Must be PLACARDED? Yes, as provided in Section VIII.

5. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X, until Strept. hemolyticus is no longer present.

6. Must practice CONCURRENT DISINFECTION? Yes, of discharges from mouth and throat; also of dishes, hands and bed clothing, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes. Airing and cleansing recommended.

TERMINATION OF ISOLATION

1. Isolation when scarlet fever is prevalent in a community at the same time, shall not be terminated until 21 days after onset of symptoms.

What to do with PERSONS EXPOSED

1. Children.

Children of school age should be kept under observation with precautionary measures identical with those outlined for scarlet fever.

2. Adults.

Give full instructions regarding danger and mode of spread, pointing out the readiness with which this disease may be conveyed by milk through contamination from an infected person or carrier.

General Measures

1. Exclusion of milk supply from public sale or use as soon as suspected, until pasteurized. Exclusion of the milk of an infected cow or cows in small herds is advised when based on bacteriological examination of the milk of each cow. Human cases or carriers must be investigated as a probable source of infection and excluded from handling milk or milk products.

2. Prompt reporting of cases and suspected cases to the State Department of Health.

3. Education in the principles of personal hygiene and avoidance of the use of common towel, drinking and eating utensils.

4. Pasteurization of all milk and dairy products is urged as an essential measure in reducing to a minimum the danger of spread of septic sore throat and other milk-borne diseases.

SMALLPOX

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL, and all public gatherings? Yes, as provided in Section X.

5. Must be ISOLATED? Yes.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

TERMINATION OF ISOLATION

Isolation for Smallpox shall not be terminated until:

1. A minimum period of fourteen days from the establishment of isolation, or, if the date of onset was reported at the time of the original report of the case, the Local Health Officer, or, in the absence of such officer, the Local Board of Health may reckon the period of isolation from that date, and

2. Until skin is free from scabs around the lesions, and

3. Until the attending physician reports complete clinical recovery, and

4. Until the measures authorized as terminal disinfection by the State Department of Health are carried out to the satisfaction of the Local Board of Health.

5. If the case terminates in death of the patient, sections (1), (2), and (3) do not apply.

RELEASE OF PERSONS BEFORE TERMINATION OF ISOLATION

1. THE CASE. The person around whom isolation is established shall be released only as described above. Exceptions to this rule must be specifically approved by the State Department of Health.

2. ADULTS NOT ILL WITH THE DISEASE, may be instructed and allowed to continue the support of family and dependents, PROVIDED they have been successfully vaccinated or revaccinated within the past seven years or have previously suffered an attack of smallpox and evidence of the same is deemed sufficient by the Health Officer.

3. SCHOOL CHILDREN KNOWN TO BE IMMUNE. Children of school age or less than school age who have been successfully vaccinated or revaccinated within the past seven years or who have previously suffered an attack of smallpox and evidence of the same is deemed sufficient by the Health Officer or school physician, MAY be allowed to return to school.

4. CHILDREN AND ADULTS NOT KNOWN TO BE IMMUNE.

(a) Persons may be released from premises that are under isolation for smallpox only when vaccinated within 72 hours after first exposure to the febrile or eruptive stage of smallpox. Such persons may return to school or resume employment when the Local Health Officer or attending physician has observed evidence of a successful "take" or primary reaction (vaccinia), or of an accelerated (vaccinoid) reaction, or of an immediate (immune) reaction. When vaccination is carried out later than 72 hours after first exposure to the febrile or eruptive stage of smallpox, the person(s) concerned should remain under observation for 21 days, because of uncertainty that vaccination, delayed beyond 72 hours, will prevent the disease.

(b) Unvaccinated persons must remain in isolation for a minimum of 21 days.

EXPLANATION.

The Iowa State Department of Health recommends the multiple pressure method of vaccination as endorsed by the United States Public Health Service (Literature forwarded promptly on request); on the other hand the old scarification method, whereby an area of skin is denuded and the vaccine allowed to "dry in," not infrequently causes severe reactions and must be condemned.

When a proper technique and a potent vaccine are employed, one of the three following reactions should be observed:

1. VACCINIA (primary reaction)—This is the normal "take," occurring in persons who have not previously been vaccinated or successfully vaccinated and have not suffered an attack of smallpox. A papule appears on the third to fifth day, which promptly develops into a vesicle surrounded by an areola of redness and induration. The vesicle and areola become larger, and the former develops into a pustule, usually reaching maximum size on the tenth day. The resulting crust falls off, usually after three or four weeks and leaves a small mark or scar, as evidence of successful vaccination. (See Figure 2.)

2. VACCINOID (accelerated reaction)—This type of reaction occurs in persons previously vaccinated or who have had smallpox in the past, but have partially lost their immunity. The reaction runs a more rapid course than does primary vaccinia. The period of incubation is shortened to three days or less and the height of the pustular stage is reached about the sixth or eighth day. All the symptoms are milder than in the primary reaction. The resulting scar, if any, is very small.

3. IMMUNE REACTION (immediate reaction)—This type of reaction occurs in persons who are fully protected against smallpox as a result of previous vaccination or a former attack of the disease. It resembles a cutaneous tuberculin reaction. Within 24 to 48 hours after the inoculation, an area of redness about one-half inch or a little more in diameter, will appear. It begins to decline within 72 hours. A small papule often appears but usually there is no vesicle, or at least only a very minute one. This reaction is often reported as a "failure" but it is in reality an excellent indication that immunity is present. If none of the above described reactions is observed, vaccination should be repeated within a week.

SMALLPOX

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL, and all public gatherings? Yes, as provided in Section X.

5. Must be ISOLATED? Yes.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

TERMINATION OF ISOLATION

Isolation for Smallpox shall not be terminated until:

1. A minimum period of fourteen days from the establishment of isolation, or, if the date of onset was reported at the time of the original report of the case, the Local Health Officer, or, in the absence of such officer, the Local Board of Health may reckon the period of isolation from that date, and

2. Until skin is free from scabs around the lesions, and

3. Until the attending physician reports complete clinical recovery, and

4. Until the measures authorized as terminal disinfection by the State Department of Health are carried out to the satisfaction of the Local Board of Health.

5. If the case terminates in death of the patient, sections (1), (2), and (3) do not apply.

RELEASE OF PERSONS BEFORE TERMINATION OF ISOLATION

1. THE CASE. The person around whom isolation is established shall be released only as described above. Exceptions to this rule must be specifically approved by the State Department of Health.

2. ADULTS NOT ILL WITH THE DISEASE, may be instructed and allowed to continue the support of family and dependents, PROVIDED they have been successfully vaccinated or revaccinated within the past seven years or have previously suffered an attack of smallpox and evidence of the same is deemed sufficient by the Health Officer.

3. SCHOOL CHILDREN KNOWN TO BE IMMUNE. Children of school age or less than school age who have been successfully vaccinated or revaccinated within the past seven years or who have previously suffered an attack of smallpox and evidence of the same is deemed sufficient by the Health Officer or school physician, MAY be allowed to return to school.

4. CHILDREN AND ADULTS NOT KNOWN TO BE IMMUNE.

(a) Persons may be released from premises that are under isolation for smallpox only when vaccinated within 72 hours after first exposure to the febrile or eruptive stage of smallpox. Such persons may return to school or resume employment when the Local Health Officer or attending physician has observed evidence of a successful "take" or primary reaction (vaccinia), or of an accelerated (vaccinoid) reaction, or of an immediate (immune) reaction. When vaccination is carried out later than 72 hours after first exposure to the febrile or eruptive stage of smallpox, the person(s) concerned should remain under observation for 21 days, because of uncertainty that vaccination, delayed beyond 72 hours, will prevent the disease.

(b) Unvaccinated persons must remain in isolation for a minimum of 21 days.

EXPLANATION.

The Iowa State Department of Health recommends the multiple pressure method of vaccination as endorsed by the United States Public Health Service (Literature forwarded promptly on request); on the other hand the old scarification method, whereby an area of skin is denuded and the vaccine allowed to "dry in," not infrequently causes severe reactions and must be condemned.

When a proper technique and a potent vaccine are employed, one of the three following reactions should be observed:

1. VACCINIA (primary reaction)—This is the normal "take," occurring in persons who have not previously been vaccinated or successfully vaccinated and have not suffered an attack of smallpox. A papule appears on the third to fifth day, which promptly develops into a vesicle surrounded by an areola of redness and induration. The vesicle and areola become larger, and the former develops into a pustule, usually reaching maximum size on the tenth day. The resulting crust falls off, usually after three or four weeks and leaves a small mark or scar, as evidence of successful vaccination. (See Figure 2.)

2. VACCINOID (accelerated reaction)—This type of reaction occurs in persons previously vaccinated or who have had smallpox in the past, but have partially lost their immunity. The reaction runs a more rapid course than does primary vaccinia. The period of incubation is shortened to three days or less and the height of the pustular stage is reached about the sixth or eighth day. All the symptoms are milder than in the primary reaction. The resulting scar, if any, is very small.

3. IMMUNE REACTION (immediate reaction)—This type of reaction occurs in persons who are fully protected against smallpox as a result of previous vaccination or a former attack of the disease. It resembles a cutaneous tuberculin reaction. Within 24 to 48 hours after the inoculation, an area of redness about one-half inch or a little more in diameter, will appear. It begins to decline within 72 hours. A small papule often appears but usually there is no vesicle, or at least only a very minute one. This reaction is often reported as a "failure" but it is in reality an excellent indication that immunity is present. If none of the above described reactions is observed, vaccination should be repeated within a week.

TYPES OF REACTION FOLLOWING VACCINATION

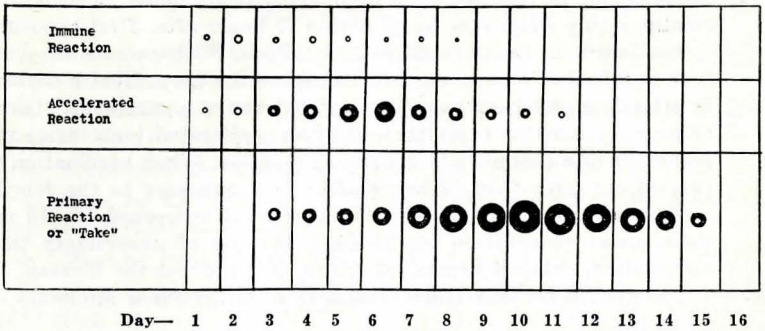

Fig. 2

Successful vaccination and revaccination carried out within seven years and repeated promptly in case of exposure, will protect against the most malignant as well as against the mild type of smallpox.

PERSONS SHALL BE CONSIDERED IMMUNE:

(a) As the result of successful vaccination with vaccine virus, not more than seven years having elapsed since the time of such successful vaccination.

(b) By having had the disease at some previous time and this fact having been made a matter of record with the Local Board of Health at the time of the illness.

What to do with the CONTACTS

CONTACTS IN THE HOME.

1. Should all be vaccinated or revaccinated within 72 hours after first exposure to the disease. If vaccinated more than 72 hours after exposure, individuals concerned should be kept under observation and instructed to report to the attending physician or health officer, in case of illness.

2. May be released from isolation only as provided in the section, "Release of persons before termination of isolation."

3. Contacts in the home immediately prior to the establishment of isolation must be (1) vaccinated within 72 hours or (2) isolated for a minimum of 21 days.

4. Contacts in the home during the period of isolation may not be released till the termination of isolation and for any additional length of time considered necessary by the Local Board of Health.

CONTACTS IN THE SCHOOL.

1. Should all be vaccinated or revaccinated, unless successfully vaccinated within a year.

2. School Boards CAN and are urged to take action to exclude from school all pupils, teachers and other persons, unless vaccinated or revaccinated, when a situation exists that threatens the health of the school children. One case of smallpox to which children may have been exposed, should be regarded as threatening the health of the school children.

3. Local Boards of Health CAN and are urged to take action to exclude from school and its work all pupils, teachers and attendants, unless vaccinated or revaccinated, when the health situation in the school threatens the general public. One case of smallpox should be regarded as threatening the public health.

FURTHER MEASURES TO PREVENT THE SPREAD OF SMALLPOX.

1. It is recommended that where smallpox is prevalent, all persons be vaccinated or revaccinated who have not had this preventive measure carried out within a year.

2. Wise parents will see to it that their children are successfully vaccinated against smallpox very early in life. Revaccination of such children before admission to school and again on entrance to high school, would be remarkably effective in banishing the loathsome smallpox from the borders of this state.

3. Boards of Education will aid materially in the prevention of smallpox through adoption of a regulation whereby, year by year, a certificate of successful vaccination accompany the child at the time of entrance to school.

SYPHILIS *(Lues) (Big Pox)*

See Venereal Diseases

TETANUS *(Lock Jaw)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from the wound must be collected on bits of paper, cotton or cloth and burned at once, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? No. Cleansing, airing and sunshine recommended.

What to do with PERSONS EXPOSED

No restrictions.

General Measures

1. Educational propaganda such as "safety-first" campaign and "safe and sane Fourth of July" campaign.

2. Prophylactic use of tetanus antitoxin when ragged or penetrating wounds have been acquired.

3. Removal of all foreign matter as early as possible from all wounds.

TRACHOMA

(Contagious Granular Conjunctivitis, Granular Eyelids)

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X, and until pronounced non-contagious by Health Officer.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, discharges from lesions are to be collected on bits of cotton, paper or cloth and burned immediately as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? No.

What to do with PERSONS EXPOSED

1. Children. Children need not be excluded from school.
2. Adults. No restrictions.

General Measures

1. Search for cases by examination of school children, of immigrants, and among the families and associates of recognized cases; in addition, search for acute secreting disease of conjunctivae and adnexed mucous membranes, both among school children and in their families, and treatment of such cases until cured.
2. Elimination of common towels and toilet articles from public places.
3. Education in the principles of personal cleanliness and the necessity of avoiding direct or indirect transference of body discharges.
4. Control of public dispensaries where communicable eye diseases are treated.

TRICHINIASIS

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? No

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? No.

What to do with PERSONS EXPOSED

No restrictions on exposed persons.

General Measures

1. Thorough cooking of all pork products at a temperature of 160° F. or over.

2. Prolonged refrigeration of pork in packing houses, in accordance with federal regulations.

3. Extermination of rats.

TUBERCULOSIS *(Pulmonary)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by State Department of Health, District and County Health Officers? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI. All discharges from the nose and throat must be collected and burned, also disinfection of the bed clothing and dishes, must be practiced.

"Open cases" or cases capable of spreading infection are forbidden the privilege of engaging in certain occupations, viz., barber, cook, waiter, kitchen helper, handling of milk or any other occupation which causes or allows direct or indirect contact with food, including milk, offered for sale. The childhood type of tuberculosis should be reported as childhood tuberculosis to the State Department of Health. All cases of the adult type of tuberculosis should be reported to the State Department of Health.

What to do with PERSONS EXPOSED

1. Children.

Children with the childhood type of tuberculosis, as determined by tuberculin (Mantoux) test and X-ray examination, should not be excluded from school, but they should be under observation, as indicated by the nature of the exposure.

2. Adults.

Periodic chest examinations are advised, together with tuberculin (Mantoux) test and X-ray examination. It is particularly desirable that teachers, nurses and food handlers have necessary examinations to determine freedom from active tuberculous infection.

General Measures

1. Education of the public in regard to the dangers of tuberculosis and the methods of control, with especial stress upon the danger of exposure and infection in early childhood.

2. Provision of dispensaries and visiting nurse service for discovery of early cases and supervision of home cases.

3. Provision of hospitals for isolation of advanced cases, and sanatoria for the treatment of early cases.

4. Provision of open-air schools and preventoria for children contacts.

5. Improvement of housing conditions and the nutrition of the poor.

6. Ventilation and elimination of dust in industrial establishments and places of public assembly.

7. Improvement of habits of personal hygiene, including proper disposal of sputum, and betterment of general living conditions.

8. Separation of babies from tuberculous mothers at birth.

9. Renovation of quarters where tuberculous cases have been housed.

10. Children exposed to careless or promiscuous persons may be removed from such exposure. See Section 3618, Code of Iowa.

TULAREMIA *(Rabbit Fever) (Deer-fly Fever)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI, all discharges from ULCERS on patient must be disinfected.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

What to do with PERSONS EXPOSED

No restrictions on exposed persons.

General Measures

1. Avoidance of the bites of, or handling of, flies and ticks when working in the infected zones during the seasonal incidence of the deer fly and tick.

2. The use of rubber gloves by persons engaged in dressing wild rabbits wherever taken, or when performing necropsies on infected laboratory animals. Employment of immune persons for dressing wild rabbits or conducting laboratory experiments. Thorough cooking of meat of wild rabbits.

TYPHOID FEVER

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, until after receipt of two negative reports on specimens of urine and feces, taken at intervals of not less than 24 hours.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, discharges from the bowels and bladder as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

Clinical cases of typhoid fever shall not be released until free from infection, and shall not be considered free from infection until two laboratory examinations of specimens of both feces and urine collected not less than 24 hours apart show the absence of the infecting organisms.
Persons shall be regarded as immune:

(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the Local Board of Health at the time of the illness.

(b) By the inoculation of 2½ billion of dead typhoid bacilli given in three divided doses one week apart, the dosage of typhoid bacilli being of 500 million, one billion and one billion respectively; not more than two years having elapsed since the inoculation.

After recovery from a case of typhoid all persons are forbidden from engaging in certain occupations, viz.—cook, waiter, kitchen helper, handler of milk, dairy products or other food for a period of 4 months after development of the disease and not thereafter until at least two specimens of stool and two specimens of urine, each specimen to be collected not less than 24 hours apart, shall have been examined at the Laboratories for the State Department of Health, and the B. typhosus shall not have been found.

No dairy products shall be allowed to be removed from a farm where a case of typhoid fever exists without permission from the State Department of Health on written recommendation of the Local Health Officer.

What to do with PERSONS EXPOSED

1. Children. Children need not be excluded from school.

2. Adult. No restrictions on exposed persons.

General Measures

1. Because of similarity of exposure all other non-immune members of the family should be immunized against typhoid.

2. Because of close contact all non-immune attendants should be immunized against typhoid.

3. Protection and purification of public water supplies.

4. Pasteurization of public milk supplies.

5. Supervision of other food supplies, and of food handlers.

6. Prevention of fly breeding.

7. Sanitary disposal of human excreta.

8. Extension of immunization by vaccination as far as practicable in communities where the disease is prevalent.

9. Supervision of typhoid carriers and their exclusion from the handling of foods. See Section XII.

10. Systematic examination of specimens of feces and urine from those who have been in contact with recognized cases, to detect carriers.

11. Persons who contemplate traveling or patronizing summer camps should protect themselves by vaccination.

12. Exclusion of suspected milk supplies pending discovery of the person or other cause of contamination of the milk.

13. Abstaining from use of contaminated water supply until adequately treated with hypochlorite or other efficient disinfectant, or unless all water used for drinking purposes is boiled before use.

TYPHUS FEVER

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? Yes, as provided in Section IX.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

Destroy all vermin and vermin eggs on body of patient, on clothing and in room.

What to do with PERSONS EXPOSED

Delousing of all persons in contact with the case.

General Measures

1. Delousing of persons, clothing, and premises during epidemics, or when they have come or have been brought into an uninfected place from an infected community.

2. Rat extermination and control.

UNDULANT FEVER *(Malta Fever)*

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. CASES and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? No.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes. Disinfect discharges and urine and all articles soiled thereby.

7. Must practice TERMINAL DISINFECTION? No, but cleaning recommended.

What to do with PERSONS EXPOSED

No restrictions necessary.

General Measures

1. Pasteurization of public milk supplies.

2. Avoidance of direct contact with infected animals.

Undulant fever is caused by an organism which causes infectious or contagious abortion in cattle and hogs. Often human beings are exposed by contact with infected hogs and cows.

3. Eradication or control of infectious (contagious) abortion in cows and hogs.

VENEREAL DISEASES

To Include

(1. Gonorrhea. 2. Syphilis. 3. Chancroid. 4. Lymphogranuloma Inguinale. 5. Granuloma Inguinale.)

What to do with the CASE

1. Must be REPORTED? Yes, directly to the State Department of Health, except when the case occurs in the jurisdiction of a full-time Municipal or County Health Officer, in which instance report shall be made to such officer who shall immediately forward same to the State Department of Health, as required by Section 2281, Code, 1931. Physicians are required to give only initial and date of birth. Voluntary WITHHOLDING of venereal disease reports constitute grounds for legal revocation of license to practice medicine.

2. SOURCE OF INFECTION. The physician should make every attempt to obtain this information and report same to the Department of Health.

3. Must be PLACARDED? Yes, if endangering the health of others, as required by Section 2288, Code, 1931.

4. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, when specifically requested by State Department of Health.

5. Must be EXCLUDED FROM SCHOOL? No, not if under treatment by a qualified physician, excepting gonorrhea in young girls, in which case it is best to exclude them to prevent spread of infection.

6. Must be QUARANTINED? Yes, as required by Section 2288, Code 1931, unless under the treatment of a competent physician and following advice regarding the exposure of others.

7. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI. All discharges are to be collected on bits of cotton, paper, or cloth and burned immediately, and all articles soiled with the discharges must be disinfected.

8. Must perform TERMINAL DISINFECTION? No. Thorough cleansing is recommended.

9. Any case of syphilis of less than three years duration not under treatment shall be considered infectious.

What to do with PERSONS EXPOSED

1. Children are not excluded from school unless themselves infected and not under treatment by a qualified physician.

2. ADULTS. The Health Officer and physician should give instruction and do everything in their power to disseminate information regarding the gravity and seriousness of these infections.

General Measures

1. The use of 1 percent silver nitrate or other approved gonococcal antiseptics in the eyes of the new born is required by law.

2. The promotion of education in matters of sex hygiene, particularly to the effect that continence in both sexes at all ages is compatible with health and normal development.

3. Suppression of prostitution by constituted authority.

4. Prohibition of advertising of services or medicines for the treatments of syphilis, gonorrhea, and other venereal diseases.

5. Elimination of common towels and common drinking cups from public places.

6. The prohibition of food handling by persons having syphilis or gonorrhea in a communicable stage.

7. Prophylaxis of those exposed to infection to be encouraged.

8. Encourage routine blood testing for syphilis, of all pregnant women.

Chancroid, Lymphogranuloma Inguinale, and Granuloma Inguinale shall be kept under control and treatment until all ulcers, discharging bubos, and lesions are healed. In every case repeated blood tests should be made to eliminate the possibility of syphilis.

VINCENT'S INFECTION

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? No.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? No, unless so required by Local Board of Health.

5. Must be QUARANTINED? No.

All cases should be under care of a physician.

They should not use cups or other utensils reaching the mouth in common with others and should have separate face towels.

Note: Dentists must report such cases of Vincent's Infection as come under their notice.

General Measures

Prevent malnutrition, give attention to oral hygiene and avoid contact with discharges or articles coming from the mouths of other people.

WHOOPING COUGH *(Pertussis)*

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, a warning card for 21 days minimum from beginning of characteristic whoop, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section XI. MINIMUM PERIOD, 21 days.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, all discharges from nose, throat, also bed clothing and dishes should be disinfected as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? No, thorough cleansing and airing recommended.

What to do with PERSONS EXPOSED

1. Children should not be excluded from school, who are immune:

By having had the disease at some previous time and having fully recovered, and this fact has been made a matter of record with the Local Board of Health at the time of the illness.

2. Children who are susceptible as defined in Section IV should be excluded from school for two weeks from the date of last contact, except when under daily inspection of School Nurse, Health Officer, or other Physician.

Adults. No restrictions for exposures.

General Measures

1. Education in habits of personal cleanliness and in the dangers of association or contact with those showing catarrhal symptoms with cough.

2. Immunization of children in infancy or early life, with approved vaccine.

YELLOW FEVER

What to do with the CASE

1. Must be REPORTED? Yes, as provided in Section VII. Cases and suspected cases must be reported.

2. INVESTIGATION OF REPORTS to be made by Local Board of Health? Yes, as required in Section III.

3. Must be PLACARDED? Yes, as provided in Section VIII.

4. Must be EXCLUDED FROM SCHOOL and all public gatherings? Yes, as provided in Section X.

5. Must be QUARANTINED? No.

6. Must practice CONCURRENT DISINFECTION? Yes, as provided in Section XI.

7. Must perform TERMINAL DISINFECTION? Yes, as provided in Section XI.

What to do with PERSONS EXPOSED

Give full instructions regarding spread.

General Measures

1. Screen against mosquitoes.

2. Eliminate breeding places of mosquitoes.

Epidemic Measures

1. Inspection service for the detection of those ill with the disease.

2. Destruction of Aedes aegypti mosquitoes, and other mosquito vectors, by fumigation; use of larvacides; eradication of breeding places.

TABLE SHOWING LENGTH OF INCUBATION, PLACARDING, ISOLATION, QUARANTINE AND COMMUNICABILITY

Disease	Average Incubation Period	Minimum Length of Placarding or Quarantine Period for Quarantinable or Placard Diseases	First Symptoms	Period of Communicability	Isolation Period for Contacts
Actinomycosis	Unknown			As long as open lesions persist	None
Ac. Inf. Conjunctivitis	36-48 hours		Inflammation of eyelids	Until all discharge has ceased	None
Ankylostomiasis	7-12 weeks			As long as ova are discharged	None
Anthrax	Within 7 days		Open ulcer on skin	Until lesions are healed. Spores may live in ground or on hair and hides indefinitely	None
Chickenpox	2-3 weeks	10 days (P)	Eruption	Until lesions on skin and mucous membrane disappear	From 10th to 20th day after first exposure unless under daily inspection
Cholera	1-5 days	14 days	Diarrhea	Usually 7-14 days	None
Dengue	3-10 days			From 24 hours before onset till 5th day of disease	None
Diphtheria	Usually 2-5 days	14 days	Croupy cough or sore throat	As long as virulent bacilli persist. Two negative cultures are necessary for release	Until cultures are negative
Dysentery	2-7 days		Cramps and diarrhea	As long as organism is contained in bowel discharges	None
Epidemic Encephalitis	About 10 days	21 days		Probably during febrile stage	None
Erysipelas	3-10 days		Inflammation of skin	As long as lesions remain	None
German Measles	14-21 days (P)	5 days	Cold, cough	8 days from onset of disease	None
Glanders	Unknown			Until bacilli disappear from discharges	None
Gonorrhea	1-8 days		Discharge	As long as organism persists in discharges	None
Impetigo	Uncertain		Sores	As long as lesions remain	None
Influenza	Usually 24-72 hours		Tired feeling	Undetermined	None
Leprosy	Undetermined		Lesions on skin	Until cured	None
Malaria	Varies, usually about 14 days		Chills and fever	Until cured	None

P—placard; I—isolation; Q—quarantine.

TABLE SHOWING LENGTH OF INCUBATION, PLACARDING, ISOLATION, QUARANTINE AND COMMUNICABILITY—Continued

Disease	Average Incubation Period	Minimum Length of Placarding or Quarantine Period for Quarantinable or Placard Diseases	First Symptoms	Period of Communicability	Isolation Period for Contacts
Measles	About 10 days	10 days (I)	Lachrymation, Cough	From 4 days before until 5 days after rash appears	From 7th to 17th day after first exposure unless under daily inspection
Meningococcus Meningitis	2-10 days	14 days	Headache, temperature	As long as organism is present in mouth and nose	One week after last contact with case
Mumps	12-26 days	14 days (I)	Swelling of jaw	Unknown	From 15th to 22nd day after first exposure unless under daily inspection
Para-typhoid Fever	4-10 days		Temperature	From prodromal symptom until bacilli disappear	None
Pellagra	Unknown		Malaise	Not communicable	None
Plague	3-7 days	Determined by H. O.	Buboes	Undetermined	None
Pneumonia	2-3 days		Cold	Unknown	None
Poliomyelitis	Usually 2-3 days	21 days	Malaise	Uncertain, perhaps 21 days	10 days after last contact with case
Rabies	Usually 2-6 weeks, maybe longer			Unknown	
Ringworm	Unknown		Crust	Until lesions are healed	None
Rocky Mountain Fever	3-10 days			Undetermined	None
Scarlet Fever	2-7 days	21 days (I)	Sore throat, fever, often vomiting	Until 3 weeks after onset and until all discharges have ceased	One week after last contact with case
Septic Sore Throat	1-3 days	H. O. determines	Sore throat	During clinical symptoms	None

Smallpox	8-16 days	14 days (I)	Like influenza	Until skin is entirely clear	Vaccinate all contacts within 72 hours. Observe following exposure for possible illness with smallpox
Syphilis	About 3 weeks		Lesion at site of infection. May not appear	As long as open lesions persist	None
Tetanus	4-21 days		Spasm of muscles		None
Trachoma	Undetermined		Inflammation of lids	As long as lesions persist	None
Tuberculosis (Pul.)	Variable		Varied	As long as bacilli persist	None. Children may be removed from exposure. See Sec. 3618, Code of Iowa
Tularemia	1-9 days		Lesion at site of infection		None
Typhoid Fever	7-23 days	Neg. stools (I)	Malaise	As long as bacilli are discharged. In case of carriers, may be for years. See Section XII, page 16	None
Typhus Fever	5-20 days	Determined by H. O.		Until 36 hours after temperature becomes normal	None
Undulant Fever	6-16 days. May be much longer		Malaise	As long as organism is in milk, or infected animal	None
Vincent's Infection	Unknown		Sore mouth	As long as organisms are present	None
Whooping Cough	Usually 7 days. May be 10 days	21 days from beginning of characteristic whoop (I)	Cough	In early stages and until after whoop begins	14 days from date of last contact except when under daily inspection
Yellow Fever	3-5 days	Determined by H. O.	Malaise	First 3 days of fever	None

CHAPTER II

Section I. For the information and guidance of Local Health Officers and other Health Officials the following statements are made regarding

CONDITIONS SPECIFICALLY DECLARED TO CONSTITUTE PUBLIC NUISANCES

1. The following conditions are specifically declared to constitute public nuisances:

(a) Bakeries, restaurants and other places where food is prepared or served which are not kept in a clean and sanitary condition; or in which persons who have any communicable disease are employed; or for which suitable toilet facilities are not provided; or in which there is evidence that rats, mice or vermin are present.

(b) Spoiled or diseased meats, whether exposed and offered for sale, or are being transported or are being kept for sale.

(c) Barns or stables, hog pens, chicken yards, manure piles or accumulations of organic material so maintained as to offer a breeding place for flies.

(d) The discharge or exposure of sewage, garbage or any other organic filth into or on any public place in such a way that transmission of infective material may result therefrom.

(e) The deposit of any poisonous material or thing on any dump, so as to allow access to it by any animal or person.

(f) Privies, in populous places, not screened against flies, and privies likely to pollute the ground or surface water from which water supply is obtained.

(g) Transportation of garbage, night soil or other organic filth in other than tight covered wagons or trucks which prevent leakage or access of flies.

(h) Stagnant water likely to afford breeding places for mosquitoes within a residential district or within a distance of 1,000 feet therefrom.

(i) Bone boiling, fat rendering establishments, or tallow or soap works or other trades where they can be shown to affect public health or produce offense.

(j) Buildings or any part thereof, which are in a dilapidated or filthy condition, which may endanger the health of persons living in them or in their vicinity.

(k) Use of the common drinking cup and of the common towel, practices which tend to spread the germs of certain respiratory and eye diseases.

(l) Careless expectoration on floors or stairways, in theatres, public buildings and other indoor places.

ABATEMENT OF NUISANCE

Section II. (a) Any Local Health Officer, upon information of the existence of a nuisance or any pollution occurring in his jurisdiction or when any such nuisance or pollution comes to his attention, shall within

a reasonable time, investigate and upon finding that such nuisance or pollution exists, shall recommend to his local board that they issue an order in writing for the abatement of the same.

(b) Such order shall specify the nature of such nuisance or pollution and shall designate the time within which such abatement or discontinuance must be accomplished. Copies of all orders shall be kept on file by the Health Officer and copies of the same shall be furnished to the prosecuting authority or to the State Commissioner of Health upon request.

(c) **Section 2239, Code of Iowa. Right to enter premises to abate nuisance.** The Local Board, Health Officer, or Sanitation Officer, may enter any building, vessel or other place for the purpose of examining into, preventing, or removing any nuisance, source of filth or cause of sickness.

(d) **Section 2240, Code of Iowa. Abatement of nuisance.** The Local Board may order the owner, occupant or person in charge of any property, building, or other place, to remove at his own expense any nuisance, source of filth, or cause of sickness found thereon, by serving on said person a written notice, stating some reasonable time within which such removal shall be made, and if such person fails to comply with such order, the local board may cause the same to be executed at the expense of the owner or occupant.

CHAPTER III

DISINFECTION AND DISINFECTANTS

GENERAL REMARKS:

It must always be borne in mind that satisfactory results from the use of any disinfectant depend largely on the quality and quantity of the material used and the completeness of the preparatory arrangements for the carrying out of the process. If a liquid disinfectant is used it is important that all parts of the article be exposed to the action of the disinfectant, that it be exposed for a sufficient length of time, and under conditions of temperature, etc., that will be most favorable for germicidal action.

Sunlight, very high temperatures, burning, boiling, steam and steam under pressure are all disinfectants, which for the destruction of the causative agents of certain diseases are highly effective. Articles of little or no value can be burned, while boiling or steam are satisfactory for bedding, clothing, etc., where shrinking or running of colors will not result. Dry heat at 160° C. for one hour will destroy all forms of life. Moist heat or boiling at 100° C. for an hour will effect the same result. Boiling for ten minutes is sufficient to render harmless practically all disease-causing organisms.

CHEMICAL DISINFECTANTS:

(1) **Bichloride of Mercury** (corrosive sublimate), a very effective germicide, but poisonous to humans and corrodes metals. Usually used in 1:1,000 solution and made by mixing and dissolving 1 dram bichloride in a gallon of water or 1 gram of the chemical in 1 liter (quart) of water. Direct exposure to this solution for half an hour is usually sufficient to destroy

all harmful bacteria. Bichloride of mercury makes a good general disinfectant for hands, sheets, handkerchiefs, etc.; not so well suited for sputum or excreta because it coagulates albuminous matter.

(2) **Carbolic Acid or Phenol** is a useful disinfectant. In 6% solutions (8 ounces to 1 gallon water) with exposure for ½ hour, it is effective against all ordinary harmful bacteria. It is suitable for disinfecting soiled clothing and bedding and also for sputum and excreta, because it does not coagulate albuminous matter.

(3) **Chlorinated Lime.** (The preparation used should contain 35% available chlorine. Much of the chlorinated lime on the market has only about half that percentage of available chlorine. Where the lower percentages are used a proportionately larger quantity must be employed.)

Chlorinated Lime may be used in solution or as a dry powder. In the dry form it is valuable as a disinfectant for cellars, privies, excreta, etc.; a solution of 8 ozs. to the gallon makes a satisfactory disinfectant for excreta and for use in scrubbing floors or walls. It must be remembered that this is a bleaching powder so while it disinfects, it may bleach out colors. Its greatest use is as a drinking water disinfectant. Chlorine gas is now generally used for this purpose in the larger centers but for small water supplies chlorinated lime is useful and is largely used. If from 1 to 6 parts of available chlorine (three times that amount of chlorinated lime) are added to one million parts of water according to the degree of freedom from organic matter disinfection will usually be satisfactory. Three ozs. of chlorinated lime to one gallon of water gives a solution of about 3%, which is a powerful disinfectant.

The Chlorinated Lime must be thoroughly mixed with the water and should be in contact with it for 15 to 20 minutes. Where small quantities of water are to be treated one-half teaspoonful of the chlorinated lime added to a quart of water makes a solution of which a teaspoonful is sufficient to disinfect ten gallons of water; mixing should be thorough and contact should continue for at least fifteen minutes before using. Chlorinated lime should be fresh and to retain its potency must be kept in a closed container in a dry place.

(4) **Formaldehyde solution** (Formalin). When up to standard strength, formalin is a 40% solution of formaldehyde gas dissolved in water. This is a satisfactory disinfectant for metals as it does not corrode them and for textile fabrics as it does not bleach them. It causes brittleness in furs and skins and is not advised for these. A ten per cent solution of formalin (14 ozs. formalin to 1 gallon of water) is the one most used and is about equal in disinfecting strength to a 5% solution of carbolic acid or a 1:500 solution of bichloride of mercury. It is a useful disinfectant for valuable articles and also for sputum, excreta, urine, etc.

(5) **Alcohol,** of not less than 60 or 70% strength is a valuable disinfectant but is expensive. Alcohol precipitates albuminous matter and is therefore unsuitable for disinfecting substances with a high protein content.

(6) **Cresol** in the form of "Liquor Cresolis Compositus" and Lysol are extensively used. They are usually employed in one to three per cent solu-

tions and are quite effective disinfectants, having about twice the disinfecting power of carbolic acid.

(7) **Copper sulphate** has about half the disinfecting power of bichloride of mercury. It is seldom used as a general disinfectant, but is especially valuable as a destroyer of the algae in water, which are responsible for most of its bad taste and odors. A solution of 1:1,000,000 is usually effective for that purpose.

FUMIGATION WITH GASES IS NOT REQUIRED. This process is of little value except for the destruction of insects.

Dependence for safety following recovery or death from a communicable disease is now placed upon concurrent and terminal disinfection. "Concurrent disinfection" is defined as the immediate disinfection and disposal of body discharges, and the immediate disinfection and destruction (preferably by burning) of all contaminated material. "Terminal disinfection" signifies the precautions taken to destroy or remove infectious material after the removal of the patient or the termination of quarantine or isolation. Release from quarantine may be made conditional upon terminal disinfection done to the satisfaction of the Health Officer.

Instead of waiting for recovery from a communicable disease and then depending for safety upon fumigation the following recommendations for the conduct of a case are made. It will not always be possible to follow them to the letter, but they should be modified only as conditions render it necessary.

When the diagnosis has been made, a room in the house should be selected in which the patient can be isolated from the rest of the family. All members of the family except the attendant should be excluded from this room for the full period during which the patient remains ill. A room which has good light and ventilation and situated as far from quarters occupied by the rest of the family as possible should be chosen. If it has an open fire place, so much the better. All unnecessary articles, draperies, floor rugs and furniture should be removed. Essential articles of furniture are (1) the patient's bed, (2) a bureau, (3) a wash stand and a waste jar, (4) one small table, (5) two wooden chairs without upholstery, (6) for children inexpensive toys and books which may be destroyed at the end of the quarantine period.

Put the bureau or stand near the head of the patient's bed and place on it: (1) a glass and a pitcher of drinking water (to be kept covered), (2) any books or toys needed by the patient, (3) a tray holding a knife, fork and two spoons for the patient's meals, (4) clinical thermometer in a glass, identified by a piece of adhesive plaster, and containing a 4 per cent solution of boracic acid, (5) medicines for the patient, (6) a bottle of disinfecting solution, (7) vaseline for lubricating the rectal thermometer.

Empty ALL bureau drawers. In the top drawer place the toilet articles. In other drawers put a supply of clean towels, paper napkins, bed linen, clean night clothes, at least a dozen large paper bags, and the patient's wash basin, enema can, cup for mouth wash. Provide at least three dozen squares of clean old linen or cheese cloth, 8x12 inches, for receiving discharges from the nose, throat, eyes, ears or open lesions. Pin a paper bag

to the edge of the bureau so that it will hang open. This is for the use of the nurse or attendant. Put all material which may be soiled with discharges INTO the bag and burn the bag and contents at least twice daily. Another such bag should be attached to the bed near the pillow, to be used by the patient. This likewise should be burned twice daily. The wash stand should be covered with oilcloth or newspaper. On the stand should be the basin and a pitcher of water, soap and towels. The table should be placed near the entrance and exit of the room and should have on it a basin containing a disinfecting solution.

Bowel and bladder discharges from patients ill with typhoid fever, paratyphoid fever, diarrhea, dysentery, hookworm, poliomyelitis or Asiatic cholera should be received into a bed-pan containing chloride of lime solution. Such a solution may be made by adding half the contents of a freshly opened pound can of chloride of lime to a gallon of water. An amount of chloride of lime solution equal to the amount of the discharges should be added. Lumps of fecal material should be broken up and mixed thoroughly with the solution. The bed-pan and its contents should be covered and allowed to stand for one hour before being emptied. If there are no toilet facilities in the house and the ground is not frozen, a trench should be provided one foot wide, three feet deep and four feet long. Such a trench should be located at least 100 feet from any source of water supply. The contents of the bed-pan should be put into the trench, and covered completely with earth. The hands of the attendant should be washed and disinfected immediately after emptying the pan.

Clothing, bed-linen or other articles which have been in contact with the patient and with infectious discharges should be removed and immersed in a disinfecting solution for one hour. They should then be boiled for 10 minutes, after which they may be laundered as usual.

Contaminated linen and bed clothing must never be sent to a commercial laundry unless they have first been boiled for 10 minutes. Whenever soiled, the door-knob, bed-railing and woodwork about the patient should be wiped with a cloth wet in disinfecting solution. Sputum should be received in paper napkins or on squares of muslin or other cloth which can be burned. Handkerchiefs should not be used. Remnants of food from the sick room should be burned immediately. They should never be returned to the ice-box. Eating utensils, such as knives, forks and spoons, dishes, etc., used by the patient should be boiled for 10 minutes immediately after use.

When quarantine is raised, the patient may be taken to the bath room and standing on a clean sheet, disrobe, placing the contaminated night clothes upon the sheet. These should then be wrapped in the sheet and the sheet and its contents should be boiled for 10 minutes. They may then be laundered. Then the patient, including the entire body and the hair, must be thoroughly washed with soap and hot water, and clean clothing must be put on.

The bath tub must then be thoroughly scrubbed with soap and hot water.

Fumigation of the sick room is unnecessary, but the floors, woodwork and bedstead must be washed with soap and hot water and the room thoroughly aired. Mattresses, pillows and other bedding which will not stand

the process of boiling should be exposed to direct sunlight for two days, turning from side to side, unless they have been grossly soiled, in which event they should be burned. Toys and books used by the patient should be burned.

Section 2268 of the Code of Iowa as amended by the 44th General Assembly reads: "In case of death from or the termination of any quarantinable disease, the person who was infected and the place of quarantine or isolation with all persons, furniture, bedding, clothing and all other articles contaminated therein shall be disinfected in accordance with the rules of the State Department of Health and under the direction of the Local Board (of health) . . . ."

If the procedure described above has been observed the work entailed will be greatly lessened, since only the room in which the patient has remained throughout his illness with be subjected to the process of disinfection.

HOW TO PREPARE DISINFECTANTS FOR FECES AND URINE*

Disinfectant	Strength of Stock Solution			How to Make and Use Stock Solution
	Per Cent*	Amount per gallon of water		
		Ounces	Tumblersful	
Crude Carbolic Acid	6	8	1	Select one of the five disinfectants opposite this space, and mix the amount designated with one gallon of water. Make sure it is actually dissolved and does not settle. This is "the stock solution" ready for use. Put on POISON label and keep tightly corked. Add at least an equal amount of the stock solution to the feces and urine to be disinfected; break up all masses and let stand one hour.
Formalin	10	14	2	
Cresol of Cresylic Acid	2	2⅔	⅓	
Liquor Cresolis Compositus	3	4	½	
Chlorinated Lime	6	8	2	
Lime and Hot Water	Do not make stock solution. Mix only as used.			Pour in enough **hot** water to cover the mass of feces, then add about one-fourth the entire bulk of unslaked lime. A large cup of lime will usually suffice for an average stool. The heat generated by the hydration of lime helps kill germs. Let stand until cool.

*The strength of disinfectant specified in this table is for feces and urine. For all other purposes a disinfecting solution one-third this strength should be used. One part of the stock solution provided for in this table added to two parts of water will make a disinfecting solution of satisfactory strength for other purposes.

CHAPTER IV—INSECTICIDES

For destroying Fleas, Bugs, Roaches, Lice, Etc.

Boiling water, fire or intense heat are effective insecticides but cannot always be easily or safely applied.

(1) **Dry Pyrethrum powder** puffed around the room or when burned in the proportion of 2 lbs. per 1,000 cubic feet of air space for at least two hours in combination with a little alcohol is an efficient insecticide, though it often only temporarily disables mosquitoes. These, while in a stupor from the gas, should be swept up and burned.

(2) **Hydrocyanic Acid Gas** is one of the most deadly insecticides, but on account of its equally deadly effect on humans it is dangerous to use. Whenever it can be used without endangering human life, as for fumigation of ships, it is the insecticide of choice. Five ounces of potassium cyanide per 1,000 cubic feet will kill all forms of insect life. Consult the U. S. P. H. Service instructions for information in regard to preparation and use of this gas.

(3) **Cyanogen Chlorid Gas** mixture is equally effective and not nearly so dangerous to humans as it gives warning of its presence by its lachrimatory effect. Its preparation and use are also outlined in a U. S. P. H. S. Bulletin.

(4) **Petroleum**, coal oil or kerosene is much used and is a valuable insecticide. It is useful as a spray against bed bugs, lice, roaches and fleas. A preparation of 2 gallons crude petroleum, ½ gallon of water and ½ lb. hard soap is particularly effective.

(5) **Arsenate of Lead** prepared from 4 ozs. of arsenate of soda (65% strength), 11 ozs. acetate of lead, and water 100 gallons is effective as an insecticide against bugs, moths, and beetles. Paris Green also serves a similar purpose.

(6) **Chloroform or Ether** is useful in stunning fleas and if exposure is prolonged kills them.

(7) **Naphthaline** in flakes is effective against fleas if spread in a thin coating over the infested floors, the doors and windows of the room being kept tightly closed over night.

(8) **Sodium fluorid** is the best poison for roaches but is useless for bed bugs. It is also poisonous for humans. To be effective it must be eaten and this bed bugs refuse to do. A good preparation for roaches is: sodium fluorid 4 lbs., powdered licorice 8 ozs., powdered borax 1 lb., pyrethrum 4 lbs., corn-starch 2 lbs.

(9) **Phosphorus Paste** containing 1 or 2% of phosphorus with sweetened flour is also useful against roaches.

(10) A mixture of **Plaster Paris** 1 part to 4 parts of flour with a supply of water placed near by is often effective against roaches, if all other food is excluded from them.

(11) **Vinegar and Kerosene** in equal parts are effective insecticides for head lice if followed by either 2½% of phenol or 1% lysol to be kept on

for one or two hours, while body lice on clothing can be readily destroyed by boiling or dry heat or by the use of steam disinfectors.

Information on the eradication of flies and mosquitoes may be obtained by writing the State Department of Health, and on the suppression of rats and other rodents by writing the U. S. Department of Agriculture.

(12) **Barium Carbonate** is one of the best rat poisons, but it is also poisonous to other living things, humans included. It is usually mixed in a dough consisting of 1 part of barium carbonate to four parts of meal or flour and then this mixture is spread on food of some kind (it is held by some that barium carbonate should not be more than 10%, as rats refuse to eat food containing a higher percentage).

(13) **Arsenic**, the powdered white form, may be used in the same way for the same purpose and with the same precautions as Barium Carbonate.

ADDITIONAL INSTRUCTIONS

Privy Vaults. The contents of a privy vault which has been used by a typhoid fever patient prior to diagnosis should be disinfected. If necessary to protect a public or private water supply the contents of such a vault may be disinfected with a liberal amount of chlorinated lime, then immediately removed and buried. Otherwise the possible spread of disease through handling infective material should be avoided by covering the contents of the vault and all surfaces in and around the privy with chlorinated lime, using 12 or 15 pounds for the purpose, and waiting two or three weeks for the typhoid fever germs to die. If practicable, it is recommended that the privy (building) be moved to another site and that the vault be filled with fresh earth to the top of the fecal matter. It is often necessary to abandon the old privy and build a new one in order to have a privy which is fly-tight. **In any event it is necessary that flies be kept out of privies which have been used by typhoid patients.**

Books. The danger of infection from books appears to have been exaggerated. Books which have not been handled by a person ill with a communicable disease need not be suspected. Books actually handled by a patient with diphtheria, scarlet fever, poliomyelitis, tuberculosis, smallpox, typhoid fever, cerebrospinal meningitis, measles or any disease of like serious nature may be treated as follows:

1. Books in a grossly soiled condition should be burned.

2. Books not obviously soiled may be kept out of circulation for three weeks. They should be identified in such a manner that they will not become mixed with other books. Exposure to sunlight and diffuse daylight, with books open and upright, will aid in killing germs.

3. Public or circulating libraries may provide a chamber for the special treatment of books returned from quarantined homes. Such a chamber would obviate the necessity for keeping the books out of circulation for a length of time.

Mattresses. When soaked with infective discharges, mattresses should be burned. If not too badly soiled, valuable mattresses may be sprayed or

wiped with a ten per cent formalin solution and placed out of doors in direct sunlight for two or three days. Other bedding which will not stand the boiling process may be given the same treatment.

Hands. The human hand, because of the many things it touches is often contaminated with infective discharges. Unless special pains are taken to disinfect the hands, after ministering to a patient or after caring for the discharges from a patient, they may readily transfer infective material to others or even be the cause of disease in the attendant. **It is essential that the hands be disinfected each time immediately after exposure to possible contamination by infective discharge.** The hands should be thoroughly washed with soap and hot water by using a brush to scrub them and then washed in a 1:1,000 bichloride of mercury solution or a solution of liquor cresolis compositus. The strength of the latter solution should be about ⅓ that of the solution for disinfecting feces and urine (see table, page 78).

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